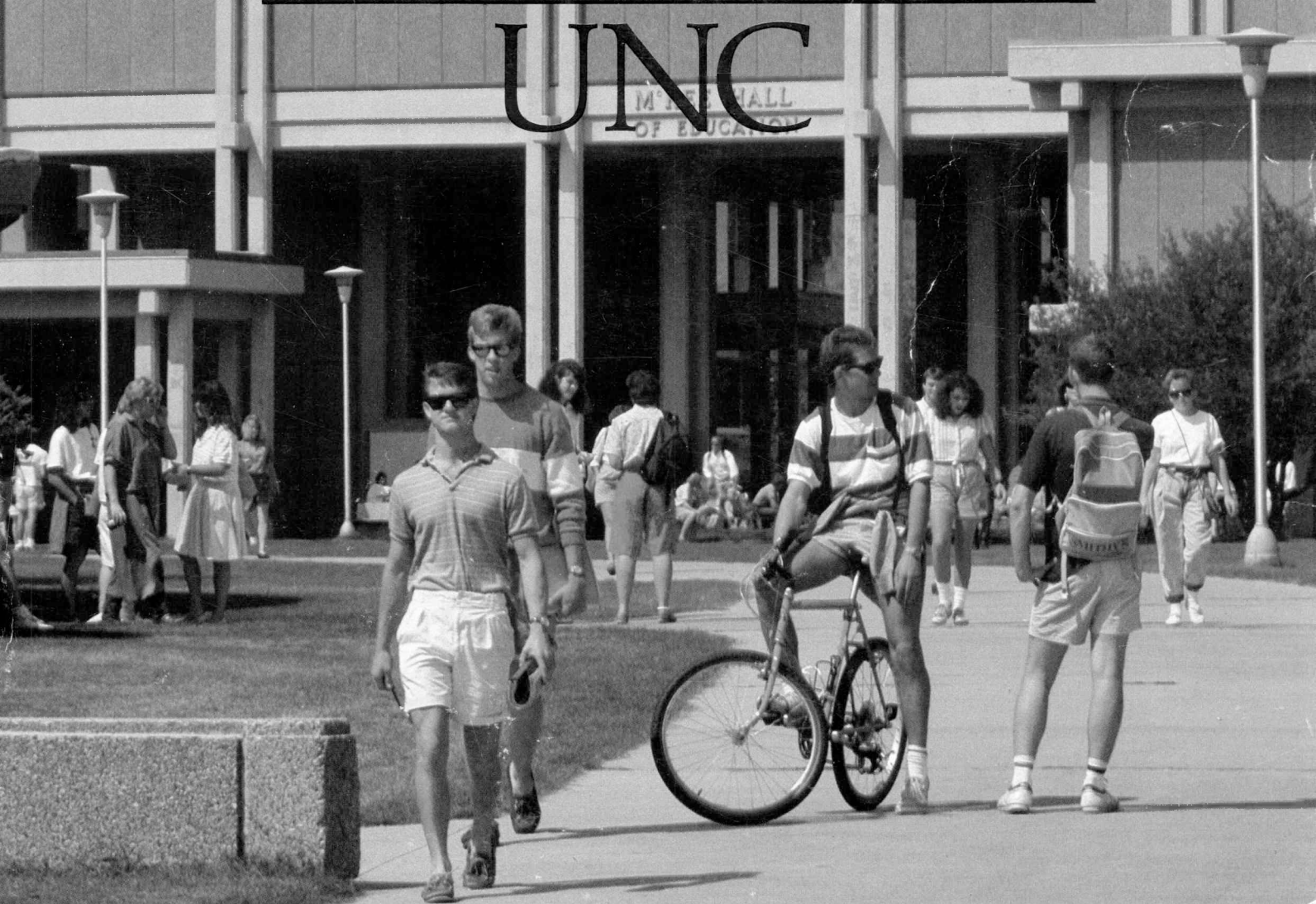




UNC



UNC

UNDERGRADUATE AND GRADUATE

BULLETIN

UNIVERSITY OF NORTHERN COLORADO

GREELEY

(303) 351-1890

EFFECTIVE DATES

SEPTEMBER 1, 1989 TO AUGUST 31, 1990

Calendar

Summer 1989

Sunday, May 14
Residence halls open
Monday, May 15
Four-Week Interim Session begins
Monday, May 29
University closed (Holiday)
Friday, June 9
Four-Week Interim Session ends
Sunday, June 11
Residence halls open
Monday, June 12
Pre-Session begins (one week)
Friday, June 16
Pre-Session ends
Monday, June 19
Registration for eight-week classes
Tuesday, June 20
Eight-Week Summer Session begins
Tuesday, July 4
University closed (Holiday)
Friday, August 11
Eight-Week Summer Session ends
Saturday, August 12
Commencement

Fall Semester, 1989

Sunday, August 27
Residence halls open
Monday-Tuesday, August 28-29
Registration

Wednesday, August 30
Classes begin
Monday, September 4
University closed (Holiday)
Thursday-Friday, November 23-24
University closed (Holiday)
Monday-Friday, December 11-15
Final exam week
Saturday, December 16
Commencement

Spring Semester, 1990

Sunday, January 14
Residence halls open
Monday, January 15
University closed (Holiday)
Tuesday, January 16
Registration
Wednesday, January 17
Classes begin
Monday-Friday, March 19-23
Spring break (No classes)
Monday-Friday, May 7-11
Final exam week
Friday, May 11
Commencement (Graduate)
Saturday, May 12
Commencement (Undergraduate)

Summer, 1990

Sunday, May 13
Residence halls open
Monday, May 14
Four-Week Interim Session begins
Monday, May 28
University closed (Holiday)
Friday, June 8
Four-Week Interim Session ends
Sunday, June 10
Residence halls open
Monday, June 11
Pre-Session begins (one week)
Friday, June 15
Pre-Session ends
Monday, June 18
Registration for eight-week classes
Tuesday, June 19
Eight-Week Summer Session begins
Wednesday, July 4
University closed (Holiday)
Friday, August 10
Eight-Week Summer Session ends
Saturday, August 11
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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Cover photos include students in front of the first campus building, Cranford Hall (1899), and in front of McKee Hall of Education (1989).

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 1989-1990 academic year and represents the best judgement 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 which are deemed sufficient to warrant such actions.

Contents

Introduction	6
UNC Centennial.....	6
Mission, Goals, Values.....	6
Accreditation and Affiliation.....	6
Services and Resources.....	8
I Policies and Procedures	
General Academic Information.....	15
Undergraduate Admission.....	26
The Graduate School.....	30
Costs and Financial Aid.....	44
II Programs of Study	
College of Arts and Sciences.....	50
College of Business Administration.....	130
College of Education.....	140
College of Health and Human Services.....	180
College of Human Performance and Leisure Studies.....	200
College of Performing and Visual Arts.....	218
III Course Descriptions	242
IV Administration and Faculty	
Board of Trustees.....	328
General Administration.....	328
Faculty.....	329
Index — General	343
Index — Programs and Courses	346

Introduction

The University of Northern Colorado is a multipurpose institution offering a wide range of graduate and undergraduate degree programs in six colleges. These are: the College of Arts and Sciences, the College of Business Administration, the College of Education, the College of Health and Human Services, the College of Human Performance and Leisure Studies, and the College of 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 major university.

The University offers approximately 2,700 academic courses annually and enrolls approximately 9,500 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 theatre, 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 a tree-lined green and older, ivy covered buildings while the west campus is distinguished by modern high-rise buildings.

UNC Centennial

The University of Northern Colorado is celebrating its one-hundredth 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 which 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 which 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 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 on Accreditation of Counseling and Related Education Programs; Council on Rehabilitation Education; National Association of Schools of Music; National Council for Accreditation of Teacher Education; the National League of Nursing, 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 American Council on Education, the Council of Graduate Schools in the United States, the Western Association of Graduate Schools, the National Association for Business Teacher Education, the American Assembly of Collegiate Schools of Business and other educational organizations.

Services and Resources

Library Services

The James A. Michener Library is named for one of America's most popular living authors, who is also a former UNC student and faculty member. In this modern facility, the UNC Library maintains its primary collection of approximately 1,375,000 units of hardbound volumes, periodicals, monographs, government documents, filmstrips, slides, maps, software programs, phonograph records, and tapes.

The stacks are open to all students and authorized patrons. Trained staff provide special instruction in library use upon request. The Computer-Based Reference Assistance (COBRA) utilizes several hundred data bases to augment the research capabilities of faculty and students.

The traditional card catalog has been replaced by an online Public Access Catalog. This system provides catalog access to the holdings of the UNC libraries and enables the user to peruse the collections of six of Colorado's research institutions, including the University of Colorado at Boulder, the Colorado School of Mines, the University of Denver, Auraria, and the Denver Public Library.

UNC students may borrow library materials from any state-supported college or university in Colorado, as well as the University of Denver, a private institution. The Interlibrary Loan Service obtains library materials for UNC students from within the state and nation as well as from foreign libraries.

Special services are available for handicapped students, including the Kurzweil reading machine 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.

Computing Services

The Computer Center, 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 and SAS. Also a computer-assisted/computer-managed instruction package, Phoenix, is provided with workstations located in Michener and McKee Hall.

The central facility houses a large IBM mainframe and Digital minicomputers. Additional equipment and materials are strategically placed throughout central and west campus. Terminals and microcomputers located in various buildings on campus are available seven days a week.

Laboratory School

A single academic unit within the College of Education, the Laboratory School is a comprehensive kindergarten through twelfth grade program. 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 Lab School serves as a research and development center and as a teacher development center in support of UNC's teacher education program.

Evening/Summer Division

The Evening/Summer Division allows the University to develop and expand the academic program to meet the needs of non-traditional students and to provide greater diversity of course offerings and schedules for students enrolled in the traditional programs.

Evening Programs. 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.

The College of Business Administration offers a Bachelor of Science in Business (last two years of the B.S. can be earned at night). In addition, the business administration core necessary to all business majors and the minor in business administration are offered at night. For information and advising, call the College of Business Administration, phone 351-2764.

The College of Education offers five degree programs at night: The Department of Special Education offers a master's degree in severe needs: communication; a master's degree in severe needs: affective; and a master's degree in severe needs: cognitive. Practicums, however, will still need to be arranged during daytime hours. The Division of Research, Evaluation and Development offers a master's degree in educational psychology and a master's degree in educational technology. In addition, the Division of Professional Studies offers a master's degree in educational administration and an administrator certification program which may be completed through evening, weekend, and summer classes.

The College of Health and Human Services offers four degree programs: the Department of Human Services offers both a master's degree and a bachelor of science in gerontology; and a master's degree in rehabilitation counseling with an emphasis in vocational evaluation. The Department of Community Health offers a master's degree in health education with an emphasis in community health. The School of Nursing offers a bachelor of science in nursing and a master's in nursing; however, clinical or internship hours must be arranged during daytime hours.

The College of Human Performance and Leisure Studies offers two degree programs through the Evening Division: a master's degree in physical education with emphases in teaching, coaching and administration; and a

master's degree in recreation with an emphasis in therapeutic recreation.

A full range of University services is available to evening students including registration, faculty advising, orientation, housing, child care and credit by examination.

Summer Session. For the past 98 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.

Lasting from mid-May to early August the session now includes a four-week interim session. During the summer session courses are scheduled in various formats lasting from one day to 10 weeks. Many of the same courses offered throughout the year are offered; in addition, some institutes and workshops are scheduled, many featuring prominent lecturers from outside the University.

Complete information is available from the Evening/Summer Division office, University Center 206, evenings from 5-7 pm, phone 351-1940, or days in Frasier 3. Staff members are available in the Evening Division office from 5-7 Monday through Thursday evenings.

Statewide Programs

The Division of Statewide Programs (DSP) serves Colorado by providing an equivalent alternative to on-campus classes and programs of study in higher education and by providing non-credit opportunities for professional development. The outreach continuing education learning experience is designed for the non-traditional or continuing student whose career or other responsibilities preclude participating in an on-campus program.

The programs include: external degree programs at several public and private locations; statewide off-campus credit and non-credit course offerings at 65 locations; independent study via correspondence and multimedia formats; and non-credit offerings in a variety of interest areas serving a multitude of constituencies. Levels of instruction include undergraduate and graduate degree and non-degree activities, involving credit and non-credit courses offered through a variety of delivery formats. Innovative schedules minimize conflict with career and personal commitments.

Students and prospective students can register for classes and communicate with the Division of Statewide Programs through a variety of mechanisms, including a Denver metro telephone line, field offices in Colorado Springs and Denver, the UNC Denver Center, and advisors from the Greeley campus who visit students on a regular basis at the field locations.

Off-Campus Courses. These include regular undergraduate and graduate courses listed in the *Bulletin* including workshops, individual studies and other special programs, offered throughout Colorado.

CEU/Non-Credit Programs. Special-focus non-credit professional development courses include professional and community programs both on- and off-campus that are offered periodically throughout the state. Representative courses include: criminal justice and law enforcement, management

development, management information systems, humanities, computer science, community health and communication competency.

Independent Studies. These are multimedia, correspondence and telecourse learning packages for home study.

External Degree Programs. Selected undergraduate and graduate degree programs are offered entirely off campus for career-oriented, employed adults. External degree programs are conducted at Lowry Air Force Base, Peterson Air Force Base, the U.S. Air Force Academy and various military, business and school district sites in metro-Denver and Colorado Springs, as well as at CCHE-designated access sites throughout the state of Colorado in response to the University's expanded mission to provide graduate teacher education programs on a statewide basis.

Class schedules, program brochures and bulletins describing continuing education offerings are available upon request from the Division of Statewide Programs, Frasier Hall 11, University of Northern Colorado, Greeley, Colorado 80639, phone 351-2944.

Student Services

Every human has specific and changing needs for emotional, physical, and social support or assistance, which must be met to fulfill personal 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, University Center, phone 351-2303.

The **Dean of Students** serves as a University-wide problem-solving, and information and referral service for UNC students. The dean coordinates a recognition and awards program. The dean's office is located in Carter Hall, phone 351-2796.

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 351-2881. (Graduate students wishing to start a program or transfer should contact the Graduate School office in Carter Hall, 351-2831.)

The **Visitor's 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 (please request this 24 hours in advance). To reserve a place in the tour van, call (303) 351-2097, or toll-free from the Denver metro area, 534-8312.

Office of Student Financial Resources is committed to provide 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.

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 351-2231. Graduate students with questions regarding University policies and procedures should contact the Graduate School in Carter Hall, 351-2831.

Academic Advising Center has three major functions for undergraduates: academic advising for students who have not declared a major; orientation for new students; and providing information about, and assistance with, meeting academic standards. Qualified professional staff and peer advisers assist undeclared students with information about course selection, general education requirements and other academic questions and concerns. This office monitors academic standards established by faculty and has the power to suspend students who fail to meet those standards. In addition, the office coordinates the orientation program for new students and their parents or spouses. The office also answers questions regarding scholastic standards and assists students experiencing academic difficulties. Contact this office in the University Center, phone 351-1391.

Career Services, Career Development and Testing Center assists students in selecting a career area and, based on that, an academic major. Career counseling, interest testing, a comprehensive career information center and computer-assisted guidance are available. The center also provides national and local administrative service for tests including the CLEP, ACT, GRE, CAT, GMAT and others. Contact this office in Kepner Hall, phone 351-2694.

Career Services, Placement assists students in their search for summer jobs or full-time employment after graduation. Services include daily posting of vacancy lists from local and national employers, on-campus interviews, referrals, job fairs, establishment of reference files, workshops and literature on preparing resumes and interviewing. Students can view national and international job directories, and company literature; review salary information, and obtain application blanks. UNC participates in reciprocal placement assistance in the U.S. and manages an alumni network. Contact this office in Kepner Hall, phone 351-2127.

Center for Human Enrichment (CHE) provides academic advising, skill development classes, tutoring, and personal and career counseling to referred students. The CHE Learning Center, located in Michener L115, offers computers, tutoring and study skills workshops for all UNC students. Contact this office at Michener L78, phone 351-1905.

Student Health Center provides a variety of medical and nursing services, emphasizing preventive medicine, first aid and specific referrals for health care. Members of a nursing staff are available to walk-ins. In addition, appointments 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 351-2412.

University Counseling Center aids students dealing with personal problems and can help them assess personal and professional goals. 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 McKee Hall room 213, phone 351-2496.

Resources for Disabled Students program offers counseling, academic assistance, notetakers, interpreters, campus transportation and various forms of physical support. Special adaptive educational equipment is available. A counselor from the Colorado Division of Rehabilitation is based in this office on designated days during the academic year. Contact this office in McKee Hall, phone 351-2289.

Re-entry Students Office provides academic and support services to undergraduate students over 25 years old. Informational seminars and workshops which focus on the needs of the older undergraduate are sponsored by Re-entry Center, located at 1905 10th Avenue, phone 351-2941.

Student Life

Housing and Food Service. The main Housing/Food Service office is located in Gordon Hall, phone 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.

Married students, single parents and their immediate families may be housed in 97 furnished units at Student Family Apartments. This complex and Harrison Residence Hall have specially designed rooms for the disabled.

University residences are furnished. Phones and local service only are provided in all facilities except Student Family Apartments. All other utilities are included in rental rates. 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. Limited storage facilities are provided. 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.

The deposit to hold housing space is \$100 for residence halls and apartments. A \$50 deposit is required to hold a unit at Student Family Apartments.

Central Campus Housing/Food Service. Belford, Sabin, Snyder, Tobey-Kendel, Wiebking and Wilson Residence Halls are Dutch colonial in architecture and are located five minutes walking distance from the University Center. These six halls house 800 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. A special-

interest floor for business students is available in Snyder Hall.

Rooms and suites accommodate two, three or four students. Each room contains beds, desk areas, bookshelves, closet and drawer space. Bathroom, laundry, a student computer room, activity and TV areas are conveniently located. Halls are coed room to room or floor to floor with the exception of Belford and Tobey-Kendel, which house only women. Non-freshmen and freshmen age 21 or more may live in Sabin. Students living in Belford, Sabin, Snyder, Tobey-Kendel, Wiebking or Wilson Halls are required to carry a 15- or 19-meals per week food plan. Conveniently located for students, Tobey-Kendel Dining Room serves meal contract holders.

West Campus Housing/Food Service. Housing over 2,000 students, West Campus has two large residence halls and two apartment complexes. The University Center, Ross, McKee and Candelaria Halls, Michener Library, Butler-Hancock Gymnasium and sports facilities are a five-minute walk away. Air-conditioned Harrison and McCowen Dining Rooms are conveniently located.

Harrison and McCowen Halls offer four-person suites with two bedrooms. Each room contains twin beds, desk areas, bookshelves, closet and drawer space. Harrison has private baths connecting bedrooms. McCowen has vanity areas connecting bedrooms with community bath facilities on each floor. Both halls are coed with intentional "quiet floor" housing available. Activity areas, TV lounges and laundry facilities are conveniently located. Residents are required to carry a 15- or 19-meals per week food plan. Air-conditioned dining rooms adjoin each facility.

Turner Apartments. Turner Apartments building is an air-conditioned, 12-story coed complex. Most apartments accommodate four students with a living-study room, private bath, two bedrooms and a small kitchen. Study lounge, student computer room, laundry facilities and limited storage areas are available. Special interest floors house those majoring or minoring in applied sciences or education and students desiring intentional "quiet floor" accommodations. Non-freshmen may purchase meal plans for use in any dining room.

Lawrenson Apartments. Lawrenson Apartments building is restricted to students who are at least 21 years of age or who have at least 30 semester credits. It is a 16-story coed complex with one floor reserved for graduate and re-entry (minimum age 25) students. Some efficiency units are available for two persons and many 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 with an activity area, TV lounge and laundry facility conveniently located in the complex. Meal plans may be purchased for use in any dining room.

Student Family Apartments. Located five minutes walking distance from Central Campus at 18th Street and 5th Avenue, these apartments accommodate families of up to four persons. One apartment resident must be registered or enrolled for at least 6 hours each semester. The 97-unit complex provides economical living with community facilities including a playground, individual storage units, recreation room and laundry facilities.

Apartments are furnished and all utilities (except phone) are included. A limited number of apartments for disabled students is available. As space is available, graduate/reentry (at least age 25) single students are contracted.

Residents must provide cooking utensils, linens and a shower curtain. The complex is managed by a professional staff member who coordinates activities and meets emergency needs. Maintenance is handled by University personnel. For additional information, phone the Manager at 351-2570.

Graduate Houses for Women. Located close to campus, Warren and Harper Graduate Houses offer economical living. Each facility holds eight women, with double rooms and limited singles in a comfortable setting.

Dining on Campus. Housing/Food Service provides convenient, economical seven-day per week cafeteria service for students and staff. Residence hall and off-campus students may choose from a wide variety of meal plans. Three dining rooms and the University Center Cafeteria offer varied menus and convenient service to satisfy many tastes. Large salad bars, varied entrees, grill and snack bar service, fast food and special event dinners are available. Students living in 8 of our 10 residence halls are required to carry a semester meal plan. Freshmen under 21, living on campus are required to carry a 19-meals per week food plan. Students with meal plans may dine in any dining room or in the Court at the University Center Cafeteria. Housing/ Food Service employs many students in residence hall desk, cash, catering and dining room operations.

Off-Campus Housing. Student government supports the Off-Campus Renters Information Service, located in the University Center student activities area (phone 351-2172), which collects information about Greeley area housing and offers assistance and referral in landlord/tenant disputes. Students can benefit by using these services before they sign any lease or contract.

Social Organizations and Activities

Fraternities and Sororities. The University recognizes chapters of seven fraternities and six sororities. The fraternities are Delta Chi, Delta Sigma Phi, Delta Upsilon, Lambda Chi Alpha, Sigma Alpha Epsilon, Sigma Chi and Tau Kappa Epsilon. The sororities are Alpha Delta Pi, Alpha Phi, Alpha Sigma Alpha, Alpha Xi Delta, Delta Zeta, and Sigma Kappa.

Student Clubs and Organizations. A wide variety of programs for student participation result in over 60 student clubs and organizations chartered each year. Included are academic societies, sports clubs, international student groups, religious groups, social organizations, departmental clubs and honorary organizations.

Student Activities. Students can become actively involved at UNC in the student newspaper, student government, an award-winning literary magazine, radio and television broadcasting, a forensics team, the Little Theater of The Rockies play productions, political groups, intramural recreation, student-run lectures, concerts and films, international student and ethnic groups, and many more.

Student Activities Office provides a trained staff to involve students in out-of-class organizations to meet social, recreational and cultural needs. The Student Representative Council recognizes nearly 60 organizations each year such as fraternities, sororities, religious, academic, honorary, minority and special interest groups. This office is located in the University Center, phone 351-2871, and includes:

- Student Representative Council, known as SRC or student government.
- SRC Services, such as the Bookmart, Legal Services, Off-Campus Housing and National Student Exchange.
- University Program Council, which is responsible for student programming and entertainment, such as concerts, box office movies, and Homecoming and other celebrations.
- Mirror, the campus newspaper.
- Colorado North Review, the campus literary magazine.
- CoPIRG, a public interest research and consumer advocate organization.
- Graphic Services and Sign Shop, which prepares materials to publicize student events.
- Greek office, which provides services and programming for fraternities and sororities.
- Black Student Union and Organization of Hispanic Students, which provide cultural awareness programs.
- Business office, which processes all student fee expenditures.
- Mailboxes and secretarial services for recognized and chartered student organizations.

Student Centers

The University Center, called the "UC," is the campus community center. It is a spacious, modern building located between the West and Main campuses. The UC includes programs, facilities and services that meet basic and requested needs of students, faculty, staff and members of surrounding communities. The focus of the UC is on the cultural, social, leisure, recreational and co-curricular activities for the campus.

The facility houses: academic support services; Registration Center; recreation area; food service; bookstore; Scheduling/Conference Services; Student Activities Program/Office; Business Office; and general administration/operations.

Meeting rooms and other facilities are available through scheduling. Preference is given to student organizations and University events. Non-University individuals and groups are charged a higher rate for certain usages and services.

The newly remodeled University Center includes a full service food court, recreation area and pub. The University Bookstore, Copy Center, and convenience stores provide a complete line of textbooks, academic supplies, gift items, collegiate clothing and other student oriented merchandise.

The UC hosts an exceptional range of events and programs. Most are organized entirely by students. It has been estimated that the combined attendance of events held at the UC approaches 200,000 people per year.

Marcus Garvey Cultural Center provides a personal support network for black students and the University through its programs of

academic assistance, personal counseling, social and cultural programming. Contact this office at 1925 10th Avenue, phone 351-2351.

Hispanic Cultural Center provides social, cultural, and educational Hispanic-oriented activities and referral for UNC/Greeley community. Contact this office at 1410 20th Street, phone 351-2424.

International Student Center provides support through ongoing orientation, advising, counseling, social, and educational activities for students from other countries. Contact this office at 1925 10th Avenue, phone 351-2396.

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 gymnastics, 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.

- Club-varsity sports include golf and women's soccer. These sports are eligible for NCAA championships.

- Club sports include bowling, fencing, hockey, lacrosse, men's soccer, powerlifting, rodeo, and rugby. These sports are not eligible for NCAA championships.

- Intramural sports Hundreds of intramural teams formed by residence halls, fraternities, sororities and independent groups participate in more than 20 sports.

University Resources

The Educational Materials Services. EMS is an instructional support service which assists the faculty in the acquisition and use of educational media materials and equipment for classroom instruction. EMS provides film rental services and maintains a permanent library of films and videotapes.

Professional staff and modern facilities can assist the faculty in producing original teaching materials including television programs, tape/slide presentations, audio tapes and graphic arts materials. EMS also operates Channel 34 on the local cable television system.

EMS is responsible for maintenance of all University-owned audiovisual equipment. Engineers are available for consultation on the purchase and installation of audiovisual and television equipment, and all purchases of audiovisual equipment or materials must be approved by EMS.

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 Publication prepares *UNC REPORT*, a weekly newspaper of events and stories about the faculty and staff and listing announcements and events for faculty and staff. Through this

office, the Division of University Relations 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 Centennial 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. The Office of Development, located in the Centennial Center, 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.

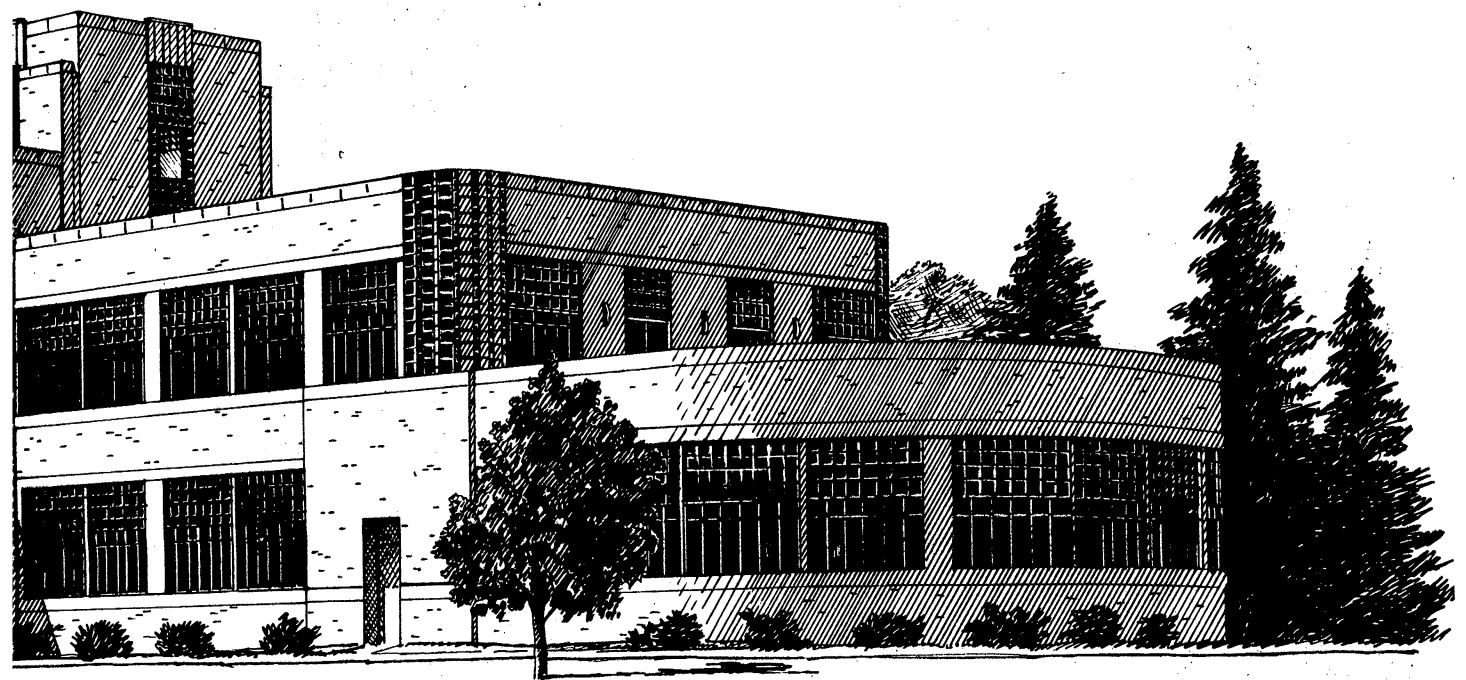
Department of Public Safety. DPS is the campus law enforcement agency, staffed by professional, full-time, state-certified peace officers. This office is responsible for the police and security patrol 24 hours a day, seven days a week. Duties include traffic and parking enforcement, all emergency medical calls, as well as felony criminal investigations. DPS can be contacted at 351-2245 (all hours).

KUNC-FM. UNC owns and operates a 100,000-watt non-commercial public radio station located at 91.5 on the FM band. KUNC is a member of National Public Radio, and broadcasts 21 hours a day, 365 days a year.

I Policies and Procedures

General Academic Information.....	15
Undergraduate Admission.....	26
The Graduate School.....	30
Costs and Financial Aid	44





General Academic Information

General Policies.....	16
Procedures	17
Other Academic Opportunities.....	19
Graduation Requirements.....	19
General Education	20
Professional Teacher Education.....	22
Honors Program	24
Recognition of Academic Excellence	24

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 four-week interim session begins immediately after spring semester. This interim session is a part of the summer session that concludes in early August. Students may enroll in the University for the first time 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 that 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, 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 one from class.

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 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, practice, 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 that he or she enrolled. The grade is not computed in the student's grade point average.

A grade of "I" is assigned when course work is incomplete at the end of the semester, and is used only when a student cannot fulfill his or her academic responsibilities during the last

weeks of a semester or because he or she missed the final examination due to sickness, an emergency in the family, etc. To change a grade of "I" to an earned grade on a student's transcript, the student must complete all course work by the last day of the next semester of attendance, 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" on the academic record and 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 approval has been granted 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. Completion of course work 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" and the credit hours are bracketed on the academic record.

To compute a semester grade point average, first remove 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 get 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 with a numerical value. 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.

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 one hour one day each week throughout the semester of approximately 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 may be 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. Four 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.

- 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. Qualified juniors and seniors 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, 10 credit hours is considered full time for insurance requirements and tuition charges. For financial aid and verification of enrollment purposes, full-time enrollment is considered 12 credit hours for undergraduate students and 10 credit hours for graduate students. A normal undergraduate course load, however, is 15 credit hours of academic credit in each semester.

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 is considered an overload and requires the payment of a tuition surcharge based on the number of credit hours taken (see chapter on Expenses).

Through the drop/add deadline, 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 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 get overload approval before the first day of class through the Academic Advising Center.
- Graduate students receive overload approval from the Graduate School.

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 15 hours per semester.

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

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 a freshman until successful completion of 30 semester hours of credit and is a sophomore until completion of 60 semester credit hours. A student is a junior until completion of 90 semester hours, and is then a senior until completing a baccalaureate degree.

Undergraduate Academic Advising

Academic planning is best achieved by the student working with a faculty advisor. Students who declare a major are assigned an advisor in their department. Undergraduate

students who have not declared a major 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, updated each semester. Information provided by the Registrar's Office, plus 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 the advisor before registration each semester. All undergraduate students must obtain a personal access code from their academic advisor before registration.

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

General Policies

Full-time and Part-time Status

Full-time status for tuition purposes is 10 credit hours for undergraduate and graduate students.

Full-time for financial aid purposes, directory information and enrollment verification is 12 credit hours or more for undergraduates, and 10 credit hours or more for graduates. Half-time is less credit hours than stated for full-time. Part-time is six credit hours or less for undergraduates, and five credit hours or less for graduates. However, any student registering for 10 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 as to 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, class.

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

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

Current eligible 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 fall term. The University will honor the request for one academic year only, therefore, the student must file the request on an annual basis. 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 *Rights and Responsibilities of Students* statement from the Office of the Vice President for Student Affairs, Carter Hall 3005, phone 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:

- "In good standing," having a semester and cumulative grade point average above the University minimum.
- "On academic probation," an intermediate status between good standing and academic suspension or 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 an official transcript.

- "Academically suspended from the University," involuntarily separated from the institution as a consequence of unacceptable academic achievement. A suspended student may seek readmission to the University. The suspension notice may state a time when such readmission may be appropriate. Academic suspension is noted on the official transcript.

For requirements regarding graduate students, see the Graduate School portion of this *Bulletin*.

Academic Probation and Suspension

All 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 achieving less than a 1.75 grade point average in any semester will be placed on academic probation for the following semester. 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 pending a review of the student's academic record.

A sophomore achieving less than a 2.0 grade point average in any one semester will be placed on academic probation for the following semester. A sophomore achieving less than a 1.75 grade point average in any one semester, less than a 1.75 cumulative grade point average during the sophomore year, or less than a 2.0 cumulative grade point average at the completion of the sophomore year may be suspended pending a review of the student's academic record.

A junior or senior achieving less than a 2.0 grade point average in any one semester will be placed on academic probation for the following semester. A junior or senior attaining less than 1.75 in any semester may be suspended pending 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 remove probationary status or failure to attain or maintain the minimum semester or cumulative grade average. A student placed on academic suspension may not re-enroll at the University of Northern Colorado without the approval of the Committee on Scholastic Standards. 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 made in writing to the chairperson of the Committee on Scholastic Standards in care of the Academic Advising Center, University Center, phone 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 would follow to ensure academic success. Although no form is specifically required, a readmission appeal form is available through the Academic Advising Center, University Center, phone 351-1391. A student who has attended other institutions since suspension from UNC must furnish an official transcript from those institutions.

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 *Rights and Responsibilities of Students* statement, and can be further explained by the Dean of Students, Carter Hall 3005, phone 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 and/or his or her academic advisor. Graduate students should contact the Academic Appeals Officer of the Graduate School.

Insurance

Students who register for 10 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 14th class day of the semester.

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 14th class day of the semester.

Student insurance policy enrollment and waiver forms may be obtained from the Student Health Center, Decker Hall. The University does not require students only registered for summer session to purchase the University's student health insurance or demonstrate possession of an acceptable insurance plan. However, any student who enrolls in the University's health insurance while also registered for 10 or more academic credit hours 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 four steps:

- Step 1.** Distribution of course selection materials and advising
- Step 2.** Selection of courses
- Step 3.** Receipt of statement of account and change of address form
- Step 4.** 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 and July 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 10 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 351-2521. After the deadline posted in the *Schedule of Classes*, students may not enroll in additional full term courses or drop full

term courses that 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 that 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 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.

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 class hours. 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 110 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 that 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 Records 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.

Application for Graduation

The student must apply for graduation upon completion of 90 semester hours of credit applicable to the degree program from UNC. The application must be evaluated and processed by the Registrar's Office and the major and minor departments. No applications for graduation are accepted after 4 pm Friday of the second week of the semester that the student expects to graduate. There is a fee assessed for graduation for the term that the student initially applies for graduation.

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 after the application was filed.

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 Academic Advising Center, University Center. 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 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 major selected by the student.

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

Course Work 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 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, Carter Hall 2007, phone 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 graduation check application available in the Registrar's Office. Upon completion of this application and review 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 higher graduate rates, the graduation check application must be returned from the appropriate department to the graduation check office by Wednesday of the third full week of the semester. 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.

Other Academic Opportunities

Directed Studies

Directed Studies are available in most disciplines. These are identified within the *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. The study must be limited to no more than six credit hours per academic semester, with no more than two 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, Carter Hall 2007, phone 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 (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 the Career Services Center, Kepner Hall, Greeley, Colorado 80639, phone 351-2694.

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 University *Bulletin* in force at the time the student first enrolls in the University. (However, University *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.

Bulletin Requirements

Requirements for graduation are checked as follows: requirements for completion of general education are determined by the *Bulletin* in force at the time the student first enrolls. The requirements for a major or minor are determined by the *Bulletin* in force at the time 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.

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 registrar 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* in force at the time the student declares a major.

Certain courses are required and 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 as long as they meet the requirements of the new department.

An *emphasis area* includes specified courses that provide a particular focus within a major. Emphasis areas 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* in force at the time the student declares a major.

The student must meet all requirements and pass all courses required by the school/college or department that 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 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

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 examination may be taken any time; but students are normally 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 351-2971.

General Education

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 that 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 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

General Education at UNC is a program of 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 Elementary Composition: Exposition 3

b. Intermediate Composition

ANT 315 Culture and Human Life Cycle 3
 BACS 205 Business Writing with Computer ... 3
 BLS 305 Survey in African-American Literature 3
 ENG 123 College Research Paper 3
 ENG 125 Communicating on a Theme 3
 ENG 127 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
 PHIL 120 The Art of Philosophical Writing 3
 SCI 291 Scientific Writing 3

2. Mathematics (3 credit hours minimum)

One course, chosen from among these listed courses:
 MATH 123 Intermediate Algebra 3
 MATH 124 College Algebra 3
 MATH 125 Plane Trigonometry 3
 MATH 127 Elementary Functions 4
 MATH 131 Calculus & Analytic Geometry I 4
 MATH 175 Topics in Finite Mathematics 3
 STAT 201 Introduction to Statistical Analysis 3
 STAT 301 Statistics for Health Sciences 3

3. Physical Activity (1 hour minimum)

a. *Lifetime and Leisure Skills*
Team Sports:
 PE 100 Basketball 1
 PE 101 Flag Football 1
 PE 102 Soccer 1
 PE 103 Softball 1
 PE 104 Volleyball 1
Lifetime Sports:
 PE 110 Badminton 1
 PE 111 Bowling 1
 PE 112 Fencing 1
 PE 113 Fly Fishing/Trap Shooting 1
 PE 114 Golf 1
 PE 115 Ice Skating 1
 PE 116 Advanced Lifesaving/Aquatic Instruction 3

PE 117 Racquetball 1
 PE 118 Swimming 1
 PE 119 Tennis 1

Adventure/Risk Activities:
 PE 125 Backpacking and Hiking 1
 PE 126 Canoeing 1
 PE 127 Cross Country Skiing 1
 PE 128 Cycling 1
 PE 129 Downhill Skiing 1
 PE 130 Kayaking 1
 PE 131 Orienteering 1
 PE 132 Adventure Activities 1
 PE 133 Scuba Diving 1
 PE 134 Self Defense 1
 PE 135 Technical Climbing 1

Exercise and Fitness:
 PE 145 Activity for Stress Management 1
 PE 146 Aerobics 1
 PE 147 Aquacize 1
 PE 148 Exercise & Weight Control 1
 PE 149 Fitness & Weight Control 1
 PE 150 Jogging & Walking 1
 PE 152 Swimming Conditioning 1
 PE 153 Weight Training 1

Dance and Movement Activities:
 PE 165 American Square & Folk Dance 1
 PE 166 Ballet 1
 PE 167 Intermediate Ballroom Dance 1
 PE 168 Ethnic Dance 1
 PE 169 Gymnastics 1
 PE 170 Jazz Dance 1
 PE 171 Modern Dance 1
 PE 172 Rhythmic Gymnastics 1
 PE 173 Self-Awareness with Movement 1
 PE 174 Social Dance 1
 PE 175 Tap Dance 1

Content

4. **Arts and Letters** (6 credit hours minimum) Two courses from two different areas with two different prefixes within the overall category:

<i>a. Fine Arts</i>		MIND 180 Great Ideas of the Western Tradition..... 3	KINE 436 Sociology of Physical Activity and Sport..... 2
ART 181 History of Art I..... 4		(may be used to meet the requirement in Literature or History or Philosophy)	NURS 318 Health Care Systems..... 3
ART 182 History of Art II..... 4		MIND 181 Great Traditions of Asia: India, China and Japan 3	SOC 100 Principles of Sociology 3
ART 190 Art Appreciation..... 3		(may be used to meet the requirement in Literature or Fine Arts or Philosophy)	SOC 120 Marriage and the Family 3
ART 210 Ceramics for Non-Art Majors..... 3		MIND 293 Play as a Route to Insight and Creation..... 3	SOC 141 Introduction to Criminal Justice..... 3
ART 290 Visual Thinking and Visual Images ... 3		(may be used to meet the requirement in Literature or Philosophy)	SOC 170 Social Problems..... 3
ENST 385 Art and the Environment 2		MIND 285 Idealism and Despair in the American Renaissance 3	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:
HUM 320 Art of the Film 3		(may be used to meet the requirement in Literature or Philosophy)	<i>a. Earth Sciences</i>
MIND 181 Great Traditions of Asia: India, China and Japan 3		MIND 290 Search for Meaning 6	AST 100 General Astronomy (L)..... 4
(may be used to meet the requirement in Fine Arts or History or Literature)		(may be used to meet the requirement in Philosophy or History)	ESCI 265 Earth Science Concepts for Elementary Teachers (L) 3
MIND 288 Contemporary Arts Connections... 3		MIND 293 Play as a Route to Insight and Creation..... 3	GEOL 100 General Geology (L)..... 4
MIND 297 Creativity in the Arts..... 3		(may be used to meet the requirement in Philosophy or Literature)	GEOL 110 Planet Earth 3
MIND 299 Great Ideas in the History of Arts.. 3		MIND 285 Idealism and Despair in the American Renaissance 3	MET 110 Climate and Humans..... 3
MUS 140 Introduction to Music 3		(may be used to meet the requirement in Philosophy or Literature)	MET 205 General Meteorology (L)..... 4
MUS 204 Music Fundamentals and Experiences 3		MIND 290 Search for Meaning 6	MIND 294 Revolutions in Science..... 3
MUS 241 Perceiving Arts..... 3		(may be used to meet the requirement in Philosophy or History)	(may be used to meet the requirements in Earth Science or Life Science or Physical Science)
MUS 243 History of Music I..... 3		MIND 293 Play as a Route to Insight and Creation..... 3	OCN 110 Oceans and Humankind..... 3
MUS 244 History of Music II..... 3		(may be used to meet the requirement in Philosophy or Literature)	OCN 200 General Oceanography (L) 4
MUS 246 Music in American History and Culture 3		MIND 285 Idealism and Despair in the American Renaissance 3	<i>b. Life Sciences</i>
MUS 340 Survey of History & Literature of Jazz..... 3		(may be used to meet the requirement in Philosophy or Literature)	ANT 130 Human Evolution 3
MUS 345 Bach and Handel 3		MIND 290 Search for Meaning 6	BIO 100 Exploring Biology..... 3
MT 330 History of Musical Theatre..... 3		(may be used to meet the requirement in Philosophy or History)	BIO 110 Principles of Biology (L)..... 4
PE 454 Dance History and Philosophy..... 2		MIND 293 Play as a Route to Insight and Creation..... 3	BIO 111 Survey of Organismal Biology (L)..... 5
THEA 110 Development of Stagecraft..... 3		(may be used to meet the requirement in Philosophy or Literature)	BIO 265 Biological Sciences Concepts for Elementary Teachers (L) 3
THEA 130 Introduction to Theatre..... 3		MIND 285 Idealism and Despair in the American Renaissance 3	BOT 270 Economic Botany (L) 3
THEA 330 History of the Theatre I..... 3		(may be used to meet the requirement in Philosophy or Literature)	FND 250 Principles of Human Nutrition 3
THEA 331 History of the Theatre II..... 3		PHIL 100 Introduction to Philosophy 3	MIND 294 Revolutions in Science..... 3
<i>b. Foreign Language</i>		PHIL 110 Figures in Western Philosophy 3	(may be used to meet the requirements in Life Science or Earth Science or Physical Science)
FR 100 Intensive Elementary French I..... 3		PHIL 352 Business Ethics 3	ZOO 115 Human Biology (L)..... 3
FR 101 Beginning French 5		5. Social Sciences (6 credit hours minimum) Two courses from two different areas with two different prefixes within the overall category:	<i>c. Mathematics</i>
FR 102 Elementary French II 5		<i>a. Anthropology</i>	MATH 110 Math and Liberal Arts 3
FR 201 Intermediate French I 4		ANT 100 General Anthropology 3	MATH 132 Calculus and Analytic Geometry II 4
GER 100 Intensive Elementary German I..... 3		ANT 120 World Archaeology 3	<i>d. Physical Science</i>
GER 101 Beginning German..... 5		<i>b. Economics</i>	CHEM 100 Consumer Chemistry Laboratory.. 3
GER 102 Elementary German II..... 5		BA 100 American Business Systems..... 3	CHEM 101 Consumer Chemistry 3
GER 201 Intermediate German I..... 4		ECON 103 Introduction to Economics: Macroeconomics 3	CHEM 108 Fundamentals of General and Organic Chemistry (L) 5
SPAN 101 Elementary Spanish I..... 5		ECON 105 Introduction to Economics: Microeconomics 3	CHEM 111 Principles of Chemistry I (L)..... 5
SPAN 102 Elementary Spanish II..... 5		MIND 286 Value Issues in Political Economy.. 3	CHEM 114 General Chemistry I 4
<i>c. History</i>		(may be used to meet the requirement in Economics or Political Science)	CHEM 117 General Chemistry (L) 1
BLS 201 Afro-American History 3		<i>c. Geography</i>	ENST 235 Chemistry and the Environment 2
BLS 202 Afro-American History II 3		GEOG 100 World Geography 3	MIND 294 Revolutions in Science..... 3
HIST 100 Survey of American History from its Begin to 1877 3		GEOG 110 Geography of the United States and Canada 3	(may be used to meet the requirements in Physical Science or Earth Science or Life Science)
HIST 101 Survey of American History from 1877 to the Present 3		GEOG 200 Location and Human Behavior 3	PHYS 220 Introduction to Physics I (L) 5
HIST 120 Western Civilization from Ancient Greece to 1689 3		<i>d. Political Science</i>	PHYS 240 General Physics I (L) 5
HIST 121 Western Civilization from 1689 to Present 3		BLS 420 Black Urban Politics..... 3	SCI 103 Physical Science..... 3
HIST 267 Age of Revolution since 17th Century 3		MIND 286 Value Issues in Political Economy.. 3	SCI 109 The Cosmos..... 3
ID 176 Idea of America..... 3		(may be used to meet the requirement in Economics or Political Science)	SCI 110 Sights and Sounds..... 3
MIND 180 Great Ideas of the Western Tradition..... 3		PSCI 100 United State National Government 3	SCI 265 Physical Science Concepts for Elementary Teachers (L) 4
(may be used to meet the requirement in History or Literature or Philosophy)		PSCI 105 Introduction to Political Science 3	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:
MIND 181 Great Traditions of Asia: India, China and Japan 3		PSCI 203 Colorado Politics..... 3	<i>a. Interdisciplinary Studies:</i>
(may be used to meet the requirement in History or Fine Arts or Literature)		PSCI 220 Introduction to International Relations..... 3	ENST 100 Introduction to Environmental Studies..... 3
MIND 290 Search for Meaning 6		<i>e. Psychology</i>	ENST 225 Energy & the Environment..... 3
(may be used to meet the requirement in History or Philosophy)		CH 336 Human Sexuality 3	GERO 205 Introduction to Gerontology 3
<i>d. Literature</i>		CMDS 160 Introduction to Human Communication Disorders 3	HUM 111 Classical Period-Middle Ages 3
ENG 131 Introduction to Literature 3		KINE 223 Psychological Kinesiology 2	HUM 112 Renaissance to Present 3
ENG 138 Modernism in Literature 3		PSY 120 Principles of Psychology 4	
ENG 260 Masterpieces in English Literature... 3		PSY 230 Human Growth and Development 4	
ENG 261 Masterpieces in American Literature 3		PSY 265 Social Psychology 3	
ENG 262 Masterpieces in World Literature..... 3		<i>f. Sociology</i>	
HISP 111 Introduction to Hispanic Literature 3		CH 205 Issues in Health..... 3	

HUM 331 Images of Women in Literature and the Arts.....	3
ID 208 Feminism: An Interdisciplinary Analysis.....	3
ID 325 Human Sexuality.....	3
NURS 200 Women's Health Care.....	3
SOC 221 Sociology of Sex Roles.....	3
<i>b. Multicultural Courses:</i>	
BLS 100 Introduction to Black Studies.....	3
BLH 101 Crisis of Identity.....	3
CH 236 Health & Lifestyle Among the Elderly.....	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
SOC 237 Sociology of Minorities.....	3
WS 120 Women and Men in Perspective.....	3
<i>c. International Cultures Courses:</i>	
ANT 110 World Cultures.....	3
ANT 314 Sex Roles in Cultural Perspective.....	3
GEOG 335 Geography of Middle America.....	3
GEOG 365 The Soviet Union.....	3
HISP 121 Spanish Civilization and Culture.....	3
HISP 131 Latin American Civilization and Culture.....	3
HISP 141 Mexican Civilization and Culture.....	3
HIST 110 African Civilization.....	3
HIST 115 Asian Civilization.....	3
HIST 118 History of Mexico.....	3
HUM 115 Literature and Arts of the Orient.....	3
MIND 289 Coming of Age in the Twentieth Century.....	3
MIND 292 Ideas in Conflict.....	3
MUS 247 Music Cultures of the World.....	3
SPCO 323 Intercultural Communication.....	3

- 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 for information relative to the CLEP program.

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.

Elementary Education Certification Requirements

The following liberal arts courses are required to meet the University General Education requirements for Elementary Education Certification 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).....	6
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 217, or WS 120).	

Subtotal..... 34

Additional courses required to complete general education and elementary certification requirements:

MUS 204.....	2
ENG 131 or PSY 230.....	3-4
MATH 181.....	3
Total.....	42-43

Note: 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	

Professional Teacher Education (PTE)

Admission

PTE consists of a set of experiences, requirements, courses and proficiency examinations applicable to all students in a teacher education program. All teacher education majors must apply for admission to PTE. 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

Notes on General Education

- 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 General Education 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 with a liberal arts-based associate of arts degree from an accredited junior/community college will be exempt from General Education requirements, but will not be exempt from the English essay requirement.

- If a student presents an ACT score of 26.0 or higher in English, he or she is exempt from the basic composition area (Skill 1a).

(45 quarter hours), the student should enroll in EDFE 270, Field-Based Experience. Students enrolled in EDFE 270 will be required to attend designated 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 designated seminars.
- Documented evidence of 20 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 English, English composition (including spelling), and mathematics computation and application.

The student must demonstrate competence in English composition and mathematics by attaining a score that is at or above the 75th percentile on the California Achievement Test, Level 19. Students who wish to take this test must register at the Professional Teacher Education Office in the Teacher Education Center at least one week before the test date. Students must take the test during the semester that they enroll in EDFE 270. Testing dates and more information are available from the PTE Office, Teacher Education Center.

Competency in oral English is demonstrated by attaining:

- A grade of B or better in SPCO 100, Public Communication (3). This course, or an equivalent that must be specifically approved, is required of all students in a teacher education program.
- Students enrolled in a non-degree certification or graduate certification program and students who completed SPCO 100 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 Teacher Education Center.

Art majors, with an emphasis in Art Education, should check with that department for specific departmental requirements for admission to PTE, in addition to those listed here.

Note: 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 certification area. If a student desires dual certification, 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 certification 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: Due to changing regulations concerning certification, all students should check with the Teacher Education Center concerning changes in the core of courses.

Course No.	Title	Semester hours
EDFE 270	Field-Based Experiences	2
EPRE 345	Educational Psychology	2
EDF 364	Foundations of Education	4
EDF 385/EDAD 385	Law and the Classroom Teacher	2
EDSE 408	Exceptionality (elementary)	2
or		
EDSE 409	Exceptionality (secondary)	3
or		
*EDSE 410	Exceptionality (K-12)	2
EDRD 410	Reading (elementary)	3
or		
EDRD 420	Reading (secondary and K-12)	2
ET 410	Instructional Technology	2
EDLS 36X	Clinical (or approved substitution)	2
Total		19-21
EDFE 444	Student Teaching (minimum)	12

*Available to students in K-12 certification 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.

Additional Requirements

In addition to the PTE core, students seeking certification are required to take a course or unit dealing with 1) public speaking (SPCO 100) and 2) multiculturalism/cultural diversity. These courses may also be applied to General Education requirements. Please consult the Teacher Education Center 282 McKee Hall, for a current list of courses that fulfill the multiculturalism/cultural diversity requirement.

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 Teacher Education Center, McKee Hall.

Student teaching assignments are made by the Teacher Education Center 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 English and on the California Achievement Test) in the student's area of certification; 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.

Certification

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

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 certification in the State of Colorado. Recommendations for certification are made only when students have successfully completed an approved teacher education program. A recommendation for certification cannot be made when a student has completed a teaching *minor*. Near the end of the semester in which the program is to be completed, the student should complete certification application forms available in the Teacher Education Center, McKee Hall. Applications are processed as soon as official transcripts, ordered by the applicant, are received from the Registrar.

The following programs have been approved for certification:

- Art, K-12
- Audiologist, K-12
- Bilingual Education, Elementary Counselor, K-6, 7-12
- Drama, Secondary
- Educational Media Specialist, K-12
- Elementary Teacher
- Elementary School Media
- English, Secondary
- Foreign Languages, Secondary — French, German, Spanish
- Mathematics, Secondary
- Middle School Teacher
- Music, K-12
- Orientation and Mobility, 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 Nurse, K-12
- School Psychologist, K-12
- Science, Secondary — Biological Science, Chemistry, Earth Science, Physical Science, Physics
- Social Studies, Secondary — History, Social Science
- Special Education Director, K-12
- Special Education Teacher — Moderate Needs, ages 5-21; Severe Needs-Cognitive, ages 5-12, 12-21; Affective, ages 5-21; Vision, ages 0-21; Hearing, ages 0-21; Profound Needs, ages 0-21; Early Childhood Special Education, ages 0-5
- Speech, Secondary
- Speech Correctionist/Language Specialist, K-12
- Superintendent, K-12

Exit Testing

At a future date, the Colorado Department of Education may implement the following requirements (as quoted from "Rules of the Colorado State Board of Education"): "To be eligible for the initial Colorado certification, 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 Teacher Education Center, McKee 282.

Standards of Professional Practice

Students admitted to the PTE program are expected to maintain accepted standards of professional behavior in all aspects of their work in the PTE program. Students who do not uphold such standards are subject to academic sanctions, including suspension or dismissal from the PTE program.

Assessment

The State of Colorado has mandated that institutions of higher education undertake assessment of their academic programs. It is the responsibility of students to participate in any assessment activities that are determined by the University to meet the mandate 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 GPA's 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 Honors-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 80631, phone 351-2940 or 351-2948.

The Honors Program of study has two general categories. First, the General Education core asks students to take classes that 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.

The General Education Core

Honors students are required 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 Tradition.....	3
MIND 181 Great Traditions of Asia.....	3
MIND 294 Revolutions in Science.....	3
HON 100 Honors Connections Seminar I.....	2

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 Science.....	3

A General Education course selected by the Coordinating Committee and dealing with "knowing yourself and your values." Among the courses already accepted for this are:
MIND 290 Search for Meaning
MIND 293 Play as a Route to Insight and Creation

3	
A General Education course selected by the Coordinating Committee and dealing with "knowing your world and times." Among the courses already accepted for this are: MIND 289 Coming of Age in the 20th Century MIND 292 Ideas in Conflict	3
HON 200 Honors Connections Seminar II.....	2

Enrichment Work

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

HON 351 Junior Honors Seminar.....	2
HON 451 Senior Honors Research Thesis.....	4
General Education courses in either Package I or II.....	9
Honors Connections Seminar I or II	2
Junior Honors Seminar.....	2
Senior Honors Research Thesis	4
Total Semester Hours for Honors	17

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 in the "University Honors Program."

Recognition of Academic Excellence

Dean's List of Distinction

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 the 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 60 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 school or 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 recommended 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. The recommendation

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.

Undergraduate Admission

Freshman Admission27
Transfer Admission.....27
International Student Admission28
Requirements for All Students28

Office of Admissions
Location: Carter Hall 3006
Telephone: (303) 351-2881, (303) 573-1379
Denver Line (no toll)

Admissions Philosophy

Admission to the University is based upon standards developed by the Colorado Commission on Higher Education (CCHE). 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

Freshmen 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).

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 an ACT standard score of 21 (SAT 890 total) or better. However, each applicant is evaluated on an individual basis. Students having higher class rank may not be required to have standardized test scores as high as those required of students with lower 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 (CCHE).

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.

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). An average score of 55 or above on the GED test is required to be considered for such admission.

Freshman Application Procedures

Applications and supporting credentials may be submitted at any time during the senior 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 \$25 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. An October or November test date is recommended for admission to UNC the following fall semester.

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 Admissions Office upon request, or upon receipt of an Application for Admission that specifically indicates a music major. Auditions are required of all applicants to the School of Music. Information concerning auditions may be requested from the School of Music, University of Northern Colorado, Frasier Hall, Greeley, Colorado 80639, phone 351-2678.

Freshman On-Campus Living Requirements

Full-time freshmen are required to live on campus and carry the 19-meals per week food plan.

Any student with less than 30 semester credits is exempt from this requirement if he or she is married, or at least 21 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: The Housing/Food Service Coordinator for Contract Release, University of Northern Colorado, Gordon 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 Housing/Food Service Office, phone 351-1945.

Transfer Students

Transfer Policy

A student who intends to transfer to UNC must submit an academic transcript of work taken at any other college or university. To be eligible to transfer, students must be in good standing at the college or university most recently attended. Academic grade requirements for admission as a transfer

student are based upon the number of credit hours of collegiate work the student has completed. A student who has completed 30 semester credit hours (45 quarter hours) 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 \$25 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 CANCELLED.**

Transfer applicants who have completed less than 30 semester hours or 45 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.

All transfer applications and official transcripts must be submitted no later than four 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. The Admissions Office provides a music application and instructions when receiving an inquiry or an Application for Admission that specifies a music major. 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 351-2678.

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 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 Admission Office. This may reduce the number of credit hours allowed for students who have

completed a liberal arts-based Associate of Arts degree.

UNC does not accept credit from other colleges and universities for grades below "C" unless the course that the grade was given was an integral part of a 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 15 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 allows no transfer of credit from institutions not accredited by an 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 351-2881, 573-1379 (Denver line), or from the Denver office, 595-4229.

Transfer Bulletin

Transfer students from Colorado junior and community colleges may use the *Bulletin* of the year that they entered the junior or community college, or they may use any *Bulletin* after the year they were enrolled. Transfer students from four-year institutions are typically evaluated under the *Bulletin* of the year that they matriculate at UNC.

International Students

An international student is a student who is not a citizen of the United States or classified by U.S. Immigration as a resident alien. There are approximately 100 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, or

3. Completing (in the U.S.) a college-level course in English composition with a grade of "B" or better (undergraduate only).

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 students should confer with their school or college, or with the International Student Advisor, Beverly House, 1925 10th Avenue, Greeley, Colorado 80639, phone 351-2396.

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, Carter Hall, 2007. International Student Services (Beverly House, 1925 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 10 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. Further information on deadlines and procedures may be obtained from the Student Health Center, phone 351-1915.

Medical Examination

Medical history report and medical examination report forms are sent to each student accepted. All students are encouraged to have both forms completed and returned to the Office of Student Health Services, Decker Hall.

Students planning to participate in intercollegiate athletics are required to submit both forms. Students who use the Student Health Service must provide the Health Center with a completed copy of the student medical history. For additional information, contact Student Health Services, Decker Hall, phone 351-2412.

Immunization 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) and rubella (German measles).

Individuals who refuse to provide the immunization information for medical, religious, or personal beliefs must complete the appropriate statement of exemption on the immunization record form.

Individuals who do not have proof of immunity against rubeola or rubella and have signed an exemption may be suspended from classes at UNC if the University president determines there is an outbreak or epidemic affecting the campus. For additional information, contact Student Health Services, Decker Hall, phone 351-2412.

Parking Regulation

Students who wish to park a vehicle on campus must purchase a University Parking Decal from Parking Services located in Gray Hall. Vehicles parked on campus in violation of UNC parking regulations may be ticketed and/or towed. Students are encouraged to call 351-2131 or stop by Gray Hall if there are any questions.

On-Campus Living Requirement

Freshman students are required to live on campus, with certain exceptions. See Freshman On-Campus Living Requirements in this chapter.

New Student Orientation

The University offers an orientation program, Discover UNC, for entering freshmen and transfer students. This program provides essential information about policies, academic advising and requirements, 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. Information concerning the orientation program can be obtained through the Academic Advising Center, 351-1391.

The Graduate School conducts an orientation for graduate students after the semester begins.

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

The Graduate School

Graduate Education.....	31
Graduate Programs and Degrees	31
General Admission.....	32
Special Admission	34
Academic Standards	35
Master's Degree Program Requirements	37
Specialist Degree Program Requirements	38
Doctoral Degree Program Requirements	40

Location: Carter Hall, 2007 & 2008
Telephone: 351-2831
Bill R. Brown, Dean
Richard N. Bourassa, Assistant Dean
Mark W. Clark, Assistant 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 attempts 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 bulletin.

In addition to the activities established for Graduate Faculty, members of the Graduate Faculty may be appointed as Doctoral Research Faculty. Only Doctoral Research Faculty may serve as the 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 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 policies and procedures related to admissions, records, and graduation.

Nature and Purpose of Graduate Degrees

Master's degrees 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 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 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 course work in the major area, supervised practica 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 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 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. Ed.D. programs prepare graduates for service in instructional, supervisory, and administrative capacities.

Doctor of Philosophy 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 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 and Degrees

Emphasis areas indented.

College of Arts and Sciences

Applied Statistics and Research Methods, M.S.
Operations Research
Applied Statistics and Research Methods, Ph.D.
Applied Statistics Research Methods
Biological Sciences, M.A.
Non-Thesis Thesis
Chemistry, M.A.
Liberal Arts Teaching
Communication, M.A.
Communication Education: Non-Thesis Option
Communication Education: Thesis Option
Human Communication Theory: Non-Thesis Option
Human Communication Theory: Thesis Option
Journalism and Mass Communications
Earth Sciences, M.A.
English, M.A.
Foreign Languages, M.A.
French Teaching
German Teaching

Spanish Teaching
 Geography, M.A.
 History, M.A.
 Interdisciplinary Studies: Secondary Science
 Teaching, M.S.
 Mathematics, M.A.
 Liberal Arts
 Teaching
 Psychology, M.A.
 Clinical Biofeedback
 Human Neuropsychology
 Sociology, M.A.
 Criminal Justice
 Family Studies

College of Education

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

College of Health and Human Services

Communication Disorders: Audiology, M.A.
 Communication Disorders: Speech/Language
 Pathology, M.A.
 Gerontology, M.A.
 Direct Service
 Generalist
 Management/Administration
 Graduate Certificate Program
 Health Education, M.A.
 Community Health
 Human Rehabilitation, Ph.D.
 Nursing, M.S.
 Education
 Rehabilitation Counseling, M.A.
 Vocational Evaluation

College of Human Performance and Leisure Studies

Physical Education, M.A.
 Administration
 Coaching
 Kinesiology
 Preventative and Rehabilitative Exercise
 Teaching
 Physical Education, Ed.D.
 Administration
 Kinesiology
 Pedagogy
 Recreation, M.A.
 Recreation Administration
 Therapeutic Recreation

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.
 Art Education
 Ceramics
 Drawing
 Fiber Arts
 Painting
 Photography
 Printmaking
 Sculpture

Graduate Interdisciplinary Degree Programs

(See "Programs of Study")
 Individually Designed Programs, M.A., M.S.,
 Ed.S., D.A., Ed.D.
 Educational Technology, M.A., Ed.D.
 Secondary Science Teaching, M.S.

Graduate Internship Program

The Graduate Internship Program for professionals in education combines a year-long classroom teaching experience with continued education. Although the program is especially appropriate for the beginning teacher who wishes to gain confidence in a real teaching situation and for the non-traditional learner who is re-entering the teaching profession, applications are accepted from anyone possessing (1) a baccalaureate degree, (2) a current, Colorado State teacher certificate, and (3) a grade point average of at least 2.75.

These internships provide structured, supervised, on-the-job training at either the elementary or secondary level and are available in a variety of subject areas in various school districts throughout the Denver metropolitan, front range, and northern Colorado areas. (Placement is determined by school district officials in consultation with the Graduate Internship Program staff and the applicant.) Furthermore, interns are paid a monthly stipend while earning 10 semester graduate credits. (In-state tuition and fees are paid by the program.)

For detailed information, write to the Graduate Internship Program, University of Northern Colorado, Greeley, Colorado 80639, or call the program office at (303) 351-2546.

Post-Doctoral Programs

Programs of research and advanced study are available in selected areas to persons holding earned Doctor of Arts, Doctor of Education, Doctor of Music Education, or Doctor of Philosophy degrees. Work on 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. Admission is granted on an individual basis.

General Admission

Procedures

The Graduate School accepts and continually processes applications throughout the year, but applicants desiring admission for a particular semester must file all application materials with the Graduate School at least 60 calendar days before the beginning of that particular semester. International students, however, must file all required application materials at least 90 calendar days before the desired semester of admission. (See Admission of International Students under "Special Admission: Procedures and Requirements.") Furthermore, because some

departments/divisions have specific application deadlines, applicants are advised to check with their intended major departments/divisions for information regarding departmental/divisional deadlines.

The necessary steps for applying to a degree program are listed below.

1. Obtain the appropriate application form from the Graduate School. International applicants must obtain application materials specifically designed for admitting international students.

2. Return the completed application form along with a \$30 non-refundable application fee to the Graduate School.

3. Write the registrars of all colleges or universities attended (including UNC) and request that two official copies of your transcripts be sent to the Graduate School.

4. Submit letters of recommendation if required by the program of study (required of all doctoral applicants).

5. Request, if required, the Educational Testing Service to send GRE General Test scores (and Subject Test scores, if applicable) to the Graduate School. GRE General Test scores are required for all doctoral applicants and must not be more than five years old (1,825 calendar days) at the time of application.

6. Contact the department/division that offers your intended degree program for information regarding any additional admission requirements established by the department/division.

Once all required materials are received by the Graduate School, they are reviewed to determine whether the applicant meets University-wide graduate admissions criteria. If the applicant satisfies the University-wide criteria, the applicant's materials are sent to the appropriate department/division for evaluation. Upon receipt of a positive recommendation by the academic unit, the Graduate School will issue an admissions letter. Applicants are not considered admitted to graduate degree programs until they receive an official admission letter from the Graduate School.

If an applicant wishes to obtain one degree enroute to a second degree, the applicant must apply for each degree program, meet the admission requirements for each degree program, and meet the degree requirements for each degree program.

Graduate Admission Classifications

After an application is evaluated by both the Graduate School and the major department/division, the Graduate School will notify the applicant of his/her admission classification. Admission classifications are defined as follows:

1. **Regular Admission:** Applicants who meet all of the admission standards set by the Graduate School and the major department/division.

2. **Conditional Admission:** Applicants admitted pending the receipt of application requirements specified by either the Graduate School and/or the major department/division. No student will be permitted to take the comprehensive examination or its equivalent until the specified requirement(s) is met.

3. **Provisional Admission:** Applicants who are admitted pending the completion of academic standards/criteria specified by the Graduate School and/or major department/division. Provisional admission status may not exceed two semesters of enrollment. No more than 18 graduate credit hours earned while provisionally admitted may be applied to a degree program. If students do not meet the prescribed academic standards/criteria, their degree programs will be terminated.

4. **Denied Admission:** Applicants who do not meet one or more of the admission standards set by the Graduate School or the major department/division and who, in the judgement of the faculty of the department/division, are not eligible for provisional admission.

General Admission Restrictions

Admission to any graduate program will remain valid for one calendar year following the first day of the applicant's proposed semester of enrollment. If a student does not begin course work during that year and if admission requirements have changed, the student will be required to satisfy the new admission requirements.

Departments/divisions sponsoring on-campus and extended degree graduate programs utilize the same criteria for admission to either program.

Laboratory School faculty, counselors, and administrators may be admitted to graduate programs at the University of Northern Colorado. Upon completion of the UNC degree, the individual may be reappointed only if granted an exception by the president.

It is the policy of the University of Northern Colorado that any tenure track employee who presently holds rank at UNC will not be admitted to graduate degree programs at UNC.

Master's Degree Admission Standards

Each applicant to a master's degree program must possess a baccalaureate degree from an accredited college or university and have a grade point average of 2.70 on the most recent 67 semester hours. However, upon recommendation by the major department/division and approval by the Graduate School, an applicant having a grade average between 2.50 and 2.69 on the most recent 67 semester hours may be admitted to a master's degree program. If an applicant whose grade average is between 2.50 and 2.69 on the most recent 67 semester hours is admitted, he/she may not transfer work taken before admission to a degree program.

An applicant whose grade average on the most recent 67 semester hours is less than 2.50 will be denied admission. Under Graduate School policy, however, those applicants who are denied for this reason may seek a special type of provisional admission. The specific provisions are as follows:

- Upon the recommendation of the major department/division and approval by the Graduate School, the program advisor will select nine semester hours of 500 and/or 600 level courses that are representative courses for the discipline.

- The selected courses must be taken in one semester and must be taken at UNC.

- If the student's grade average for the selected courses is less than 3.33, the student will not be granted regular admission to a degree program.

- If the student's grade average for the selected courses is equal to or greater than 3.33, the department/division shall recommend to the Dean of the Graduate School that the student be granted regular admission or that the student be denied regular admission.

- After taking into account the recommendation, the Dean of the Graduate School will make the final decision regarding the admission of the student to a degree program.

- If the student is granted regular admission, the nine semester hours of selected courses will count in the student's degree program, but the student may not transfer work taken before the provisional admission.

Specialist Degree Admission Standards

Each applicant must possess a master's degree from an accredited college or university. Depending upon the specialization area, some applicants may be accepted with only a baccalaureate degree. The applicant must have a grade average of 2.70 or better on the most recent 67 semester hours and an adequate academic background in the proposed area of specialization as defined by the department/division through which the specialist degree is to be awarded. In addition, the applicant should possess at least 24 calendar months of appropriate work experience in the specialization as determined by the major department/division.

Any student 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 Admission Standards

Each applicant for the doctoral degree must possess a baccalaureate degree from an accredited college or university and submit three letters of recommendation stating that the applicant has the ability to do doctoral work in the proposed discipline(s).

Furthermore, the Graduate School requires that a doctoral applicant must have a grade average of 3.20 on the most recent 60 semester hours and a GRE combined verbal, quantitative, and analytical score (not more than five years — 1,825 calendar days old) of at least 1,350 or a grade average of 3.00 on the most recent 60 semester hours and a GRE combined verbal, quantitative, and analytical score (not more than five years — 1,825 calendar days old) of at least 1,500.

Departments/divisions offering doctoral programs may recommend admission based upon supplemental/alternate criteria that have been established by the major department/division and approved by the Graduate Council. Check with the major department/division for information regarding supplemental/alternate admission criteria.

Special Admission: Procedures and Requirements

Application for a Certification Program

The necessary steps for applying for a certification program for applicants who are not seeking admission to a degree program are:

1. Obtain the "Non-Degree Graduate Student Certification Application" and "Plan to Seek Institutional Recommendation for a Teaching Certificate" forms from the Graduate School.

2. Complete the forms and return them to the Graduate School along with a \$30 non-refundable application fee.

3. Write the registrars of all colleges or universities attended (including UNC) and request that one official copy of your transcript be sent to the Graduate School.

Applicants to a certification program must possess a baccalaureate degree from an accredited college or university and have a grade point average of 2.70 on the most recent 67 semester hours. However, upon recommendation by the major department/division, an applicant having a grade average between 2.50 and 2.69 on the most recent 67 semester hours may be admitted to a certification program.

Although an applicant may simultaneously apply for a degree program and a certification program, an applicant who is admitted to a certification program only is not automatically admitted to a degree program. If the original application is for certification only, a separate application must be made for degree program admission. In such cases, all rules governing work acceptable in a degree program apply.

Unclassified Status

Students who hold at least a B.A. degree and who have not been officially admitted to a graduate degree program may register as unclassified graduate students. Unless a student applied to or attended UNC within the last year, the student must complete a "Statistical Information Form" at the Registration Center or at the Graduate School.

None of the course work taken as an unclassified graduate student may be used toward meeting residence requirements in a degree program. Furthermore, no more than 10 semester hours of unclassified work may be counted in a graduate degree program. (See Graduate Academic Standards section for additional information.)

Admission to the Non-Baccalaureate Master's Degree Program

An individual who does not possess a baccalaureate degree may be admitted to a master's degree program by submitting an application that demonstrates that the applicant possesses the equivalent of a

baccalaureate level education and the ability to do graduate work. The necessary steps for applying are:

1. Obtain the appropriate application form from the Graduate School.

2. Complete the form and return it along with a \$30 non-refundable application fee to the Graduate School.

3. Write the registrars of all colleges or universities attended (including UNC) and request that two official copies of your transcripts be sent to the Graduate School.

4. Submit a resume of work experience and accomplishments to the Graduate School.

5. Submit a proposed plan of study, an outline of your career or personal goals, and a description of the relationship between your plan of study and your goals.

6. Take the Miller's Analogy or the GRE General Test and have the test scores sent to the Graduate School.

7. Submit three letters of recommendation from persons who are familiar with your work stating that you are capable of pursuing a graduate degree at this university.

An applicant's prior transcript(s) must show at least 60 semester hours of course work with a grade average of 2.70 and must give evidence of knowledge in English, humanities, mathematics, natural science, and social science. Up to 30 semester hours of this course work may be replaced by 50th percentile CLEP scores in each of the five areas.

Based upon sound academic rationale, the Committee On Admissions has the authority to waive any criterion for individual applicants.

Applicants applying under the provisions of this program may not take graduate level courses until they are officially admitted.

Admission of Baccalaureate Holders from Non-Accredited Institutions

Applicants holding baccalaureate degrees from non-accredited institutions will be considered for admission on the basis of the same criteria used for the admission of applicants to the Non-Baccalaureate Degree Program. It should be understood that "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 a Graduate Interdisciplinary Degree Program

The steps for applying for an Interdisciplinary Degree program are:

1. Obtain the degree application form and the appropriate "Guidelines for Interdisciplinary Degree Programs."

2. Complete the forms and return them to the Graduate School along with the \$30 non-refundable application fee.

3. Write the registrars of all colleges or universities attended (including UNC) and

request that two official copies of your transcripts be sent to the Graduate School.

4. If applying for a doctoral program, request that one official copy of your GRE General Test scores (not more than five years — 1,825 calendar days old) be sent to the Graduate School.

5. Submit three letters of recommendation stating that you have the ability to pursue a graduate interdisciplinary degree.

6. Submit a written statement of career goals and objectives and a rationale for pursuing the chosen interdisciplinary program. Include a list of the disciplines that will be combined in the proposed program.

7. Submit a current vita that summarizes academic and professional experiences, activities, publications, and other pertinent information.

Provisional admission will be granted to an applicant who meets the admission requirements of the Graduate School and who is recommended for provisional admission by the appropriate departments/divisions. Upon official notification of provisional admission, a student, in conjunction with his/her assigned faculty advisors, is authorized to prepare a program proposal.

The student may be in provisional admission status for a maximum of 15 semester hours. When a student is notified by the Graduate School of provisional admission, he/she is authorized to begin preparation of the program proposal in conjunction with two or more assigned faculty advisors. The student may be in provisional status until he/she has completed 15 semester hours applicable to the program. There is no guarantee that a provisionally-admitted student will be granted regular admission to a degree program. All Graduate School policies apply to interdisciplinary program students.

Admission of International Students

An international student is a student who is not a citizen of the United States or classified by United States Immigration and Naturalization Service as a resident alien. International applicants must meet English proficiency requirements as well as academic and financial requirements before being fully admitted to the university.

Except for English proficiency scores and GMAT and GRE scores, if applicable, all application materials and all related credentials must be received by the Graduate School no later than 90 calendar days before the semester that the student wishes to enroll. The scores for the English proficiency exams must be received before the beginning of the student's initial semester of enrollment at UNC.

All international applicants must take these steps to be considered for admission:

1. Obtain the appropriate application forms from the Graduate School.

2. Complete the forms and return them along with a \$30 non-refundable application fee.

3. Submit the "Financial Statement for International Students" and "Affidavit of Support" forms. (Forms are attached to the application form.)

4. Submit all records of previous schooling such as mark sheets, official transcripts, diplomas, and certificates. These records must show courses taken, grades awarded, and

degrees earned. An English translation must be included.

5. Document English proficiency by submitting one of the following:

- a. Evidence that you have obtained a current TOEFL score of 520 or above with no score less than 52 on any of the three sections; or
- b. Evidence that you have obtained a current 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 the department/division has additional language requirements. Although credit will be awarded for any UNC course work required to increase a student's English skills, such credit will not count toward a graduate degree.

Upon application approval, international applicants will be sent a letter of admission, and the Form I-20 will be issued. If an applicant is granted conditional admission pending completion of English language schooling and receipt of English proficiency scores, the Form I-20 will be issued by the English language school. Do 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 your visa.

Academic Standards

Program Advisors

The Dean of the Graduate School will ask the department/division chairperson or school dean to appoint a program advisor for each student who has been admitted to a degree program. All degree programs must be planned with and approved by the student's program advisor. In addition, the program advisor has the authority in some instances to recommend changing the departmental/divisional program to suit the individual needs of the student. However, unless a program advisor obtains written approval from the Graduate School, he/she is not permitted to alter a university requirement, a plan of study, or a published departmental/divisional requirement.

Either the student or the advisor may ask for a change in advisors, but all such requests must be presented to the major department/division for approval. If the request is approved, the department/division will appoint a replacement subject to approval by the Dean of the Graduate School.

Change in Graduate Degree Program

(Change of Major)

If a student is admitted to and begins work in a degree program and if the student desires to change programs, the student must complete a

"Request for Change of Major" form and receive appropriate departmental/divisional approvals. If approval is given, the Dean of the Graduate School will ask the chairperson of the new department/division to appoint an advisor and will notify the former department/division of the change.

If a student is admitted to but does not begin work in a degree program and if such a student desires to change programs, the student must request that the Graduate School cancel the original admission and send the application materials to a new degree program.

Eligibility for Enrollment

Graduate students who are eligible to enroll in courses are classified in the following three categories:

- Those who have been officially admitted into a degree program.
- Those who have been officially admitted into a certification program.
- Those who have been officially cleared to register as unclassified students.

Competency in English Usage and Speech Skills

A student is expected to have competency in English usage and speech skills that will enable the student to progress satisfactorily in the chosen curriculum and to perform adequately in the chosen vocation. Consequently, a student may be counseled or required by a department and/or advisor to enroll in an English and/or a speech course(s).

Work Toward Next Higher Degree

Students who are within 12 semester hours of graduation for one degree program may apply for conditional admission to the next higher degree. If the applicant is provisionally admitted to the next higher degree, he/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. Furthermore, no student may earn more than 12 credits of graduate work applicable to the next higher degree. Seniors registering for master's degree work under the dual registration 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. (See specific "Degree Requirements" in this *Bulletin*.)

Course Numbering

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 chairperson, an undergraduate student may take 500-level courses. Only those undergraduate students who have been granted approval to count work toward the next higher degree will be permitted to take 600 level courses.

Double Numbering

Courses numbered 300-599 may be double numbered allowing undergraduate and graduate students to enroll simultaneously, but all double-numbered courses may be offered independently at either the graduate or undergraduate level. No course identified as an undergraduate General Education course may be double numbered.

It is not the intent of the Graduate Council to have graduate programs built upon double-numbered courses. Therefore, at least two-thirds of a student's master's degree program must be in courses that are not double-numbered courses or in courses that have been taught solely as 500-level or above graduate courses.

The department shall maintain a file documenting the completion of work required for the double-numbered courses.

Unclassified UNC Hours

A maximum of 10 semester hours of course work taken while in an unclassified status may be used toward a graduate degree program. Upon admission to a degree program, a student may obtain, complete, and submit a "Petition to Count Work in a Degree Program" form. The work requested must be reviewed and approved by the Graduate School and the student's program advisor before the work will be included in the degree program.

Because all credits applicable to graduate degrees must be earned within the time limits specified for each degree program, the unclassified hours must fall within the specified time limit in order to actually count the petitioned work in the degree program. (See specific "Degree Requirements" in this *Bulletin*.)

Degree Credit Limitations

Courses in which grades of "A," "B," "C," or "S" are earned shall be the only credits counted toward meeting the requirements of a graduate degree at the University of Northern Colorado.

No graduate credit is given for any correspondence course, although graduate credit may be awarded for certain multimedia courses completed through UNC Division of Statewide Programs. These courses must be approved by the student's major department/division and by the Dean of the Graduate School before enrollment.

Course Load Policy

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 15 hours per semester.

During the Summer Term, a graduate student may register for a maximum of two semester hours of course work during the one-week session, six semester hours of course work during the four-week session, or 10 semester hours of course work during the eight-week session. If a Summer Term graduate student registers for a combination of courses during the various Summer Sessions, he/she may register for a maximum of 16 credit hours.

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.

Directed Studies

Directed studies are available in most disciplines. Directed studies are courses that a qualified student may receive university credit for undertaking an individualized investigation under the direct supervision of a UNC faculty member. Courses numbered 622 are graduate level. 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 during a semester that he/she is not actually employed on campus at UNC.

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's curriculum. The nature of the study must involve intensive use of relevant literature, materials, or techniques, and the study report must reflect a synthesis of the information or techniques acquired.

The following policies apply to Directed Study courses:

- No more than two directed studies with a combined total of no more than six semester hours may be taken in a semester. Furthermore, each study is limited to no more than four graduate semester hours.

- The student shall apply through the department/division that the study is to be supervised.

- 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.

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 may also 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 concerned. It is the student's responsibility to acquire the appropriate style manual for reference.

The faculty member must forward one copy of the final report to the appropriate departmental/divisional office indicating the final grade awarded.

(See specific "Degree Requirements" regarding limitations on counting directed study courses in degree programs.)

Enrichment Course Work for Graduate Students

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. Those students interested in this arrangement may obtain the guidelines and the proper form in the Graduate School Office. Forms must be completed and approved before the term that a student proposes to take a course.

Grades

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, "W" for withdrawal, "UW" for unapproved withdrawal, "S" for satisfactory, "U" for unsatisfactory, "NC" for audit, and "NR" for no report. "S," "U," "UW," "W," "NC," and "NR" grades are not counted in determining grade point average. Courses that "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."

"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 the appropriate grade when the work is completed.

No grade can be changed after the first two weeks of the semester following the receipt of the original grade by the Records Office.

Grade Point Average

In order to remain in a graduate program, a graduate student must maintain a cumulative grade point average of 3.00 in graduate level courses. If a student's cumulative grade average drops below 3.00 after taking at least 10 graduate level credit hours, a warning letter will be sent to the student. The degree program of a student who has been sent a warning letter will be terminated if the student's grade point

average is below 3.00 after completing an additional 10 or more graduate level credit hours that grades of "A," "B," "C," "D," or "F" are earned. All grades earned during the semester that the 10th hour is earned are used in the calculation of the grade average.

Theses and Dissertations

Each candidate presenting a master's thesis, a detailed explanation of a creative project, a written report of the specialist practicum, or a doctoral dissertation must furnish an original and three copies of the final document to the Graduate School. The Graduate School shall submit these documents for binding, but students must pay for binding, mailing, microfilming, and publishing.

Various departments of the university have adopted specific style manuals for their disciplines. A student should check with his/her department/division for the specific style acceptable to that department/division.

The Graduate School publishes a *Thesis and Dissertation Manual* giving instructions and examples. This manual may be purchased at the UNC Bookstore. In cases of conflict between the adopted style manual and the current *Thesis and Dissertation Manual*, the current *Thesis and Dissertation Manual* will take precedence.

Termination of Degree Program

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

- Based on an overall evaluation of a student's progress, the major department/division recommends that the student's program be terminated. (See specific "Degree Requirements" for additional information.)

- A provisionally admitted student fails to meet the prescribed standards/criteria of the provisional admission.

- The student fails to maintain the cumulative grade point average standard.

- The student fails the retake of the written comprehensive examination or its approved equivalent.

- In programs requiring an oral comprehensive examination, the student fails the retake (if authorized) of the oral comprehensive examination.

- The student submits an unsatisfactory thesis or dissertation.

- The time limit established for the degree program expires before the degree requirements are completed.

A student desiring to appeal the termination of his/her degree program must follow the procedures outlined in the *Student's Rights and Responsibilities* statement. Copies of the statement are available in the Dean of Students Office.

Readmission Subsequent to Program Termination

A student whose degree program has been terminated may be admitted to a different degree program.

- The student must apply for admission to a different degree program.

- If admitted, the student must complete all standard requirements of the program that he/she has been admitted.
- A maximum of six semester hours from the terminated program may be counted in the new program if approved by the new program advisor and the Graduate School.
- If the student's former program was terminated due to failure of the retake of the comprehensive examination or its equivalent, the student will be allowed only one opportunity to pass the comprehensive examination or approved equivalent in the new program.

Removal of Written Comprehensive Exams from Student Files

After all names and identifying marks are removed, written comprehensive examinations are transferred to a general Graduate School file where they shall be retained for a period of 12 calendar months. Although the Graduate School 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.

Petition Process

Students may petition the Dean of the Graduate School to waive any Graduate School rule published in this *Bulletin*. Petition forms, obtained at the Graduate School, must be completed by the student and signed by the student, the program advisor, and the department/division chairperson. The program advisor and the department/division chairperson must indicate in writing their positions regarding the student's petition.

Decisions by the Dean of the Graduate School are final.

Graduation Requirements

Requirements for graduation 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 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. A student may not choose, however, to meet some requirements in one *Bulletin* and other requirements in another *Bulletin*. The student must specify the *Bulletin* under which he/she wishes to be evaluated and must meet all requirements in that *Bulletin* only.

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 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 45 calendar days before the end of the semester preceding 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 pm 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.

The Graduate School will not accept a graduation application that is not signed by the program advisor and/or not accompanied by a service copy of the student's transcript.

If the student does not complete all requirements for the degree and, therefore, does not graduate at the end of the proposed semester, the application will be placed in the deferred file. The student must give written notice to the Graduate School when he/she wishes to appear again on the tentative list of graduates. Such notice must be submitted before the end of the second week of the semester that the student plans to graduate.

All graduating students are encouraged to attend graduation. Those students participating in the graduation ceremony are required to wear appropriate academic regalia. Those who choose not to participate must notify the Graduate School at least three weeks (21 calendar days) before graduation.

Diplomas are not issued at the graduation ceremony. They will be mailed to addresses supplied by the students to the Graduate School. Failure to supply the mailing address could result in a delay in receipt of the diploma.

No diploma will be issued until all requirements for graduation have been met.

Master's Degree Program Requirements

Plan of Study

Students and advisors should check with the Graduate School regarding the current policy on the degree program plan of study requirements.

All students are expected to know the requirements for the degrees they intend to earn. Although the Graduate School staff and program advisors will help as much as possible, the responsibility for any errors in enrollment or in the interpretation of rules rests with each student.

Credit Requirements

The Graduate School requires a minimum of 30 semester hours for a master's degree, and at least 18 of those credit hours must be taken

in the discipline. Students are required to have a minimum of 42 graduate and undergraduate credit hours in the discipline. No course may be counted in the 42 credit hour requirement if the course grade is "D," "F," or "U." Students are advised, however, that departments/divisions may have requirements that exceed the minimums established by the University.

All students must register for "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, at the discretion of the program advisor, the student has received a graduate degree from an accredited college or university within the last five years. The program advisor must request in writing that this requirement be waived. 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 for "Introduction to Graduate Research."

Biological Sciences, BIO 694; Business, BACS 690; Chemistry, CHEM 599; Communication, COMM 600; Earth Sciences, ESCI 600; Educational Psychology, EPRE 670; Elementary Education, EDEL 610; English, ENG 600; Foreign Languages, FL 631; Geography, GEOG 600; History, HIST 600; Health and Human Services, HRS 610; Mathematics, MATH 510; Music, MUS 600; Nursing, NURS 505; Physical Education and Recreation, PE 602; Sociology, SOC 660; Theatre Arts, THEA 600; Visual Arts, ART 600.

A maximum of nine semester hours, individually or in combination, of courses numbered 508, 513, or 622 may be counted toward the master's degree.

Residency

Although the Graduate School does not have a residency requirement for master's degree students, departments/divisions have the authority to set residency requirements for their programs. Students are advised, therefore, to check with the major department/division for information regarding program residency requirements.

Program advisors are responsible for monitoring departmental/divisional residency requirements for graduate students they are advising.

Double Major

With the approval of the departments/divisions concerned and with the approval of the Graduate School, a master's degree student may declare a double major. Double majors must meet all requirements for each major and must apply for, take, and pass the comprehensive examination or approved equivalent in each major.

Students who desire a double major are advised that only one degree will be awarded. The student must specify, therefore, which program is to be used for degree purposes.

A student with a double major may drop one of the majors before taking the comprehensive examination in either major if he/she has a UNC grade average of 3.00 in the major being dropped.

Time Limit

The maximum time allowed for the completion of the master's degree is five calendar years beginning with the first semester of enrollment after admission has been granted. However, if a student has approval to count work taken before first enrollment after admission, the student must complete the degree within five calendar years beginning with the earliest work counted in the program.

Transfer of Credit

A student may transfer a maximum of six semester hours (nine quarter hours) of graduate credit from another accredited institution, which 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.

Transfer work is not used in the calculation of the graduate grade point average.

Graduate credit earned in off-campus or "extension" courses is not transferable unless it is acceptable to the major department/division and to the Graduate School.

A student who wishes to transfer credit must obtain and complete a "Petition to Count Work in a Degree Program" form and must obtain an official transcript(s) showing the course(s) to be transferred. The student must then present the completed petition and the transcript to the Graduate School for the approval or disapproval of the Graduate School Dean or his/her designee. If the Graduate School Dean or designee approves and signs the petition, the student must present the petition and the transcript to his/her program advisor for approval or disapproval. If the program advisor approves and signs the petition, the student must return the signed petition and transcript to the Graduate School no later than the second Friday of the semester that the student plans to graduate.

Continuation in a Master's Program

Departments/divisions are directed to continually evaluate the progress of each student and to recommend the termination of a student's program whenever it seems advisable. Termination recommendations will be academic in nature, will be based on the professional judgement of the graduate faculty, and may or may not be based on course work performance.

The Graduate School will terminate a student's master's degree program if all of the following conditions have been met.

- The student has been officially admitted to the Graduate School and has been accepted by the department/division filing the recommendation for termination.
- The student has completed at least 10 semester hours of the University of Northern

Colorado course work subsequent to his/ her official admission date.

- The student's program advisor has submitted a written recommendation for termination to the Graduate School that has been co-signed by the department/division chairperson.

Upon receipt of notification from the Graduate School that the degree program has been terminated, a student may file an appeal. (Refer to the appeal procedures outlined in the *Student's Rights and Responsibilities* statement. Copies of the statement are available in the Dean of Students Office.)

Comprehensive Examinations/Approved Equivalents

Each master's degree student must pass a written comprehensive examination or otherwise show competency in the discipline by successfully completing a departmentally/divisionally approved equivalent that has been approved by the Graduate Council. 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/her program.

This examination or its approved equivalent may not be taken until the student (a) has been granted regular admission to the degree program, (b) has completed at least 20 semester hours of work applicable toward the degree, (c) has maintained a grade average of at least 3.00 in his/her graduate degree program, and (d) has obtained approvals from both the program advisor and the Graduate School.

In order to take this examination or its approved equivalent, a student must obtain and complete a form titled "Permit to Take Written Comprehensive Examination or Otherwise Demonstrate Competency." Double major students must obtain a permit for each major, and interdisciplinary students must obtain the signature of each area advisor on the permit. This permit is valid only for the semester that it is issued.

A completed permit form must be received by the Graduate School no later than 4 pm on the second Friday of the semester that the examination is to be taken. After receiving the completed permit form and after 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 or its equivalent before receipt of the permit from the Graduate School. 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 comprehensive examination session and not returning will be determined as having taken the examination and will be evaluated accordingly.

After the student has taken the examination or completed the approved equivalent, the program advisor must return the report form to the Graduate School indicating that the student passed, failed, or did not take the examination.

The report form must be signed by the program advisor and, if applicable, by all committee members evaluating the approved equivalent and must be returned to the Graduate School on or before the date specified by the Graduate School.

Students who are permitted to retake the examination or its equivalent may not schedule the retake during the same semester that the original examination was taken. A second permit is required for the retake. If a student fails the retake of the examination or its equivalent, his/her degree program will be terminated.

Master's Thesis/Creative Project

Some departments require all master's degree candidates to submit a thesis. Theses are optional in all other programs. A minimum/maximum of six credit hours are granted for a master's thesis.

All academic units that desire the alternative of requiring a creative project in lieu of the master's thesis or the comprehensive examination will clearly define what is meant by a creative 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 each student before his/her enrollment in a creative 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. If a creative project is to be copyrighted, University Microfilms requires an abstract of the project. These items must be submitted to the Graduate School at least four weeks (28 calendar days) before the student's anticipated graduation date.

Upon filing a thesis, the Graduate School will require each student to complete specific forms related to the thesis and 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.

External Degree Programs

Students admitted to external degree programs are expected to meet the same degree requirements as on-campus students.

Specialist Degree Program Requirements

Plan of Study

A specialist supervising committee, a two-person committee 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 and elective course work and that clearly identifies UNC course work, transfer course work, and double numbered course work. 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/her designee shall review the plan and approve or disapprove the plan. If approved, the "Plan of Study" form will be filed in the student's folder. If disapproved, the "Plan of Study" form will be returned to the student for correction and resubmission.

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

All students are expected to know the requirements for the degrees they intend to earn. Although the Graduate School staff and program advisors will help as much as possible, the responsibility for any errors in enrollment or in the interpretation of rules rests with each student.

Credit Requirements

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. No course may be counted in the credit hour requirements if the course grade is "D," "F," or "U." Students are advised, however, that departments/divisions may have requirements that exceed the minimums established by the University.

All students must register for "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, at the discretion of the program advisor, the student has received a degree at the same level from an accredited college or university within the last five years. The program advisor must request in writing that this requirement be waived. Departmental prefix 622 shall not be used as a substitute for the research course.

The research-oriented course listed below has been approved by the Graduate Council as a substitute course for "Advanced Research Methods."

School Psychology, PPSY 781.

A maximum of nine semester hours (12 semester hours if baccalaureate only student), individually or in combination, of courses numbered in the 508, 513, or 622 may be counted toward the specialist degree.

Residency

Although the Graduate School does not have a residency requirement for specialist degree

students, departments/divisions have the authority to set residency requirements for their programs. Students are advised, therefore, to check with the major department/division for information regarding program residency requirements.

Program advisors are responsible for monitoring departmental/divisional residency requirements for graduate students they are advising.

Time Limit

The maximum time allowed for completion of the Specialist in Education degree is six calendar years beginning with the first semester of enrollment after admission has been granted. However, if a student has approval to count work taken before first enrollment after admission, the student must complete the degree within six calendar years beginning with the earliest work counted in the program.

Transfer of Credit

A specialist student may transfer a maximum of six semester hours (nine 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.

Transfer work is not used in the calculation of the graduate grade point average.

Graduate credit earned in off-campus or "extension" courses is not transferable unless it is acceptable to the major department/division and to the Graduate School.

A student who wishes to transfer credit must obtain and complete a "Petition to Count Work in a Degree Program" form and must obtain an official transcript(s) showing the course(s) to be transferred. The student must then present the completed petition and the transcript to the Graduate School for the approval or disapproval of the Graduate School Dean or his/her designee. If the Graduate School Dean or designee approves and signs the petition, the student must present the petition and the transcript to his/her program advisor for approval or disapproval. If the program advisor approves and signs the petition, the student must return the signed petition and transcript to the Graduate School no later than the second Friday of the semester that the student plans to graduate.

Continuation in a Specialist Program

Departments/divisions are directed to continually evaluate the progress of each student and to recommend the termination of a student's program whenever it seems advisable. Termination recommendations will be academic in nature, will be based on the professional judgement of the graduate faculty,

and may or may not be based on course work performance.

Furthermore, departments/divisions are specifically directed to evaluate each specialist student when the student has completed 10 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 in the evaluation. Indeed, one criterion may outweigh all others. Based on the evaluation, the program advisor and the department/division must submit a written recommendation to the Graduate School that the student's program be continued or terminated. On the basis of the recommendation, the Graduate School will notify the student in writing that his/her program is being continued or that his/her program is terminated.

Upon receipt of notification from the Graduate School that the degree program has been terminated, a student may file an appeal. (Refer to the appeal procedures outlined in the *Student's Rights and Responsibilities* statement. Copies of the statement are available in the Dean of Students Office.)

Comprehensive Examinations

Each specialist student must pass a written comprehensive examination in the area of specialization and pass any other examination(s) the supervising committee may require. The 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/her program.

The comprehensive written examination may not be taken until the student (a) has been granted regular admission to the degree program, (b) has filed an approved plan of study, (c) has completed at least 20 semester hours [50 semester hours if baccalaureate only student] of work applicable toward the degree, not including the practicum, (d) has maintained a grade average of at least 3.00 in his/her graduate degree program, (e) has received a letter of continuance from the Graduate School, and (f) has obtained approvals from both the supervising committee and the Graduate School.

In order to take this examination, a student must obtain a form titled "Permit to Take Written Comprehensive Examination or Otherwise Demonstrate Competency." Interdisciplinary students must obtain the signature of each area advisor on the permit. This permit is valid only for the semester that it is issued.

A completed permit form must be received by the Graduate School no later than 4 pm on the second Friday of the semester that the examination is to be taken. After receiving the completed permit form and after 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.

Once the comprehensive examination session begins, it is considered a take of the

examination. Students leaving the comprehensive examination session and not returning will be determined as having taken the examination and will be evaluated accordingly.

After the student has taken the examination, the program advisor must return the report form to the Graduate School indicating that the student passed, failed, or did not take the examination. The report form must be signed by the program advisor and must be returned to the Graduate School on or before the date specified by the Graduate School.

Students who are permitted to retake the examination may not schedule the retake during the same semester that the original examination was taken. A second permit is required for the retake. If a student fails the retake of the examination, his/her degree program will be terminated.

Practicum

Under the direction of a supervising committee, each specialist student is required to complete at least five semester hours of the "Specialist Degree Practicum" (D.S. 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/her supervising committee for approval. No later than two weeks (14 calendar days) before the end 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/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 Degree Program Requirements

Plan of Study

A doctoral program advisory committee, a committee of at least three persons appointed and approved 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 the doctoral program advisory committee, each doctoral student must prepare a long-range plan of study that clearly specifies core requirements and elective course work and that clearly identifies UNC course work, transfer course work, and double numbered course work. 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/her designee shall review the plan and approve or disapprove the plan. If approved, the "Plan of Study" form will be filed in the student's folder. If disapproved, the "Plan of Study" form will be returned to the student for correction and resubmission.

The plan of study will be the basis for the graduation check. Any deviation from the plan of study must be approved by the program advisory committee and the Dean of the Graduate School or his/her designee.

All students are expected to know the requirements for the degrees they intend to earn. Although the Graduate School staff and program advisors will help as much as possible, the responsibility for any errors in enrollment or in the interpretation of rules rests with each student.

Credit Requirements

A student entering a doctoral program who possesses a master's degree must earn a minimum of 64 semester hours of graduate credit beyond the master's degree. This includes a minimum of 48 semester hours of graduate level course work, a minimum/maximum of four semester hours of proposal research, and a minimum/maximum of 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 course work, a minimum/maximum of four semester hours of proposal research, and a minimum/maximum of 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. With the approval of the Graduate School, the program advisor, and all members of the doctoral program advisory committee, a student who possesses a specialist degree may count a maximum of 21 semester hours of specialist work in the doctoral program. Students are advised that departments/divisions may have requirements that exceed the minimums established by the University.

All doctoral students must register for "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, at the discretion of the program advisor, the student has received a degree at the same level from an accredited college or university within the last five years. The program advisor must request in writing that this requirement be waived. 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 for "Advanced Research Methods."

Applied Statistics, STAT 715; Biological Sciences, BIO 694; Chemistry, CHEM 599; Elementary Education, Elementary Education: Early Childhood Education, and Reading, EPRE 505, EPRE 603, EDEL 710, and EDEL 711; Music and Music Education, MUS 700; Physical Education, PE 703, Kinesiology emphasis, KINE 625 or SOC 660.

A maximum of nine semester hours, individually or in combination, of courses numbered in the 508, 513, or 622 may be counted toward a doctoral degree.

Residency

Although departments/divisions may have more stringent residency requirements, the Graduate School requires each doctoral 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 10 or more credit hours of on-campus course work applicable to the doctoral degree. Courses numbered 601, 622, 701, and 797 will not be counted in the 10 or more credit hours unless a student also completes at least six other credit hours of on-campus course work applicable to the doctoral degree. 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/she may satisfy the requirement by completing 20 or more credit hours of on-campus work applicable to the degree during consecutive terms. Such a student must receive written permission from his/her immediate supervisor and a recommendation from his/her major department/division to fulfill the residency requirements in this manner. The supervisor's permission and the department's/division's recommendation must be filed with the Graduate School.

Dual Doctoral Guidelines

A student may receive a second doctoral degree from UNC provided that the requirements for the first doctoral degree have been completed before initiating the second degree program and provided that no course work from the first degree is counted towards the second degree.

Except for interdisciplinary degree programs, double majors are not permitted at the doctoral level.

Time Limit

The maximum time allowed for completion of a doctoral degree is eight calendar years beginning with the student's first semester of enrollment after admission has been granted. However, if a student has approval to count work taken before first enrollment after admission, the student must complete the degree within eight calendar years beginning with the earliest work counted in the program.

If a student has completed a specialist in education degree at the time he/she begins a doctoral degree program and if the student is permitted to include 21 semester hours of his/her specialist degree credit in the doctoral program, the student shall have a maximum time limit of five calendar years to earn the doctoral degree.

Transfer of Credit

A doctoral student may transfer a maximum of nine semester hours (13 quarter hours) of graduate credit from another accredited institution, which 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.

Transfer work is not used in the calculation of the graduate grade point average.

Graduate credit earned in off-campus or "extension" courses is not transferable unless it is acceptable to the major department/division and to the Graduate School.

In some cases additional transfer credit may be accepted by the student's oral comprehensive examination committee 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 nine semester hours. A request to transfer more than the original nine semester hours must be approved by the entire oral comprehensive examination committee.

A student who wishes to transfer credit must obtain and complete a "Petition to Count Work in a Degree Program" form and 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 the approval or disapproval of the Graduate School Dean or his/her designee. If the Graduate School Dean or designee approves and signs the petition, the student must present the petition and the transcript to his/her program advisor and, if applicable, to his/her oral comprehensive examination committee for approval or disapproval. If the program advisor and committee members, if applicable, approve and sign the petition, the student must return the signed petition and transcript to the Graduate School no later than the second Friday of the semester that the student plans to graduate.

Continuation in a Doctoral Program

Departments/divisions are directed to continually evaluate the progress of each student and to recommend termination of a student's program whenever it seems advisable. Termination recommendations will be academic in nature, will be based on the professional judgement of the graduate faculty, and may or may not be based on course work performance.

Furthermore, departments/divisions are specifically directed to evaluate each doctoral

student when the student has completed 10 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 he/she is (a) encouraged to continue in his/her program, (b) discouraged from continuing in his/her program, or (c) placed on review for one semester.

When a doctoral student has completed 20 semester hours in the degree program the student's department/division will submit a written recommendation to the Graduate School and the student that the student's program be continued or terminated. On the basis of the recommendation, the Graduate School will notify the student in writing that his/her program is being continued or that his/her program is terminated.

Upon receipt of notification from the Graduate School that the degree program has been terminated, a student may file an appeal. (Refer to the appeal procedures outlined in the *Student's Rights and Responsibilities* statement. Copies of the statement are available in the Dean of Students Office.)

Research Tools

All Ph.D. students must demonstrate competency in two acceptable research tools. The level of competency and the 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 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.

Appointment of Committees

Besides the doctoral program advisory committee (see Plan of Study), 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. In addition, the Dean of the Graduate School or his/her designee will appoint a faculty representative from another department. The faculty representative must be present at all of the student's doctoral oral examinations and dissertation defenses. No faculty member will be appointed to a doctoral committee without his/her consent. University employees who are not members of the Graduate Faculty shall not be appointed as members of doctoral committees.

The student, the advisor, or a committee member may request a change in committee membership by presenting a request to the major department/division. Except in the case

of the faculty representative membership, the department/division will rule on the request. If the department/division supports the request, the department/division will appoint a replacement member(s) subject to approval by the Dean of the Graduate School.

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

Individuals who are not members of the Graduate Faculty may be appointed as additional committee members. Students must clear such appointments with the Graduate School.

An oral comprehensive examination committee must be appointed before the student takes the written comprehensive examination.

The dissertation proposal and the dissertation shall be under the supervision of a research advisor, who is a member of the doctoral research faculty, and a research committee. The research committee will not be appointed, however, until after the student has passed the written and oral comprehensive examinations. All rules and regulations pertaining to the oral examination committee apply to the doctoral research committee.

Written Comprehensive Examination

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 (a) has been granted regular admission to the degree program, (b) has filed an approved plan of study, (c) has completed at least 36 semester hours [60 semester hours if baccalaureate only student] of work applicable toward the degree that at least 24 semester hours have been completed on campus, (d) has maintained a grade average of at least 3.00 in his/her graduate degree program, (e) has received an encouragement or a discouragement letter after 10 semester hours, (f) has received a continuance letter from the department/division and the Graduate School after 20 semester hours, (g) has had an oral comprehensive examination committee appointed, and (h) has obtained approvals from both the program advisor and the Graduate School.

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

In order to take this examination, a student must obtain and complete a form titled "Permit to Take Written Comprehensive Examination or Otherwise Demonstrate Competency." Interdisciplinary students must obtain the

signature of each area 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 permit form must be received by the Graduate School no later than 4 pm on the second Friday of the semester that the examination is to be taken. After receiving the completed permit form and after 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.

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

After the student has taken the examination, the program advisor must return the report form to the Graduate School indicating that the student passed, failed, or did not take the examination. The report form must be signed by the program advisor and must be returned to the Graduate School before a request to schedule an oral comprehensive examination.

Students who are permitted to retake the examination may not schedule the retake during the same semester that the original examination was taken. A second permit is required for the retake. If a student fails the retake of the examination, his/her degree program will be terminated.

When the student passes the written comprehensive examination, copies of the examination must be made available to all members of the oral comprehensive examination committee before the oral examination. After the oral comprehensive examination, the original written comprehensive examination must be filed with the Graduate School.

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 at least three weeks (21 calendar days) before the exam date. 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 may also 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, or (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, and 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 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.

Admission to Candidacy

To be eligible for admission to candidacy for a doctoral degree, each student must satisfy all of the following requirements.

- The student must have completed "Introduction to Doctoral Research" or an approved equivalent.
- The student must 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.
- The student must have a cumulative grade average equal to or greater than 3.00 in his/her graduate degree program.
- The student must have passed the written and oral comprehensive examinations.
- The student must have filed with the Graduate School an approved dissertation proposal containing the signatures of all committee members.
- The student must have registered for a minimum/maximum of four semester hours of departmental prefix 797.
- The student must 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.

The names of those students who meet the above stated criteria will be submitted to the Graduate Council for admission to candidacy.

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

Continuous Registration

Once a doctoral student has been admitted to candidacy, he/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 course work or by paying a doctoral service fee. If a student elects to pay the doctoral service fee for one or more semesters, the doctoral service fee must be paid in the Accounting Office no later than the regular fee payment period of the semester(s) in question.

Any doctoral student who fails to be continuously enrolled or to pay the doctoral service fee will be subject to doctoral program suspension. Such suspension will involve revocation of candidacy, dissolution of the doctoral research committee, and denial of usage of university resources, services, and facilities.

Students whose programs have been suspended may request program reinstatement. Reinstatement 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 reinstatement.

Reinstatement to candidacy shall require, in addition to program reinstatement, approval of an acceptable dissertation proposal by the new research committee.

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

Dissertation Proposal and the Dissertation

A dissertation pertaining to a significant topic in the candidate's major subject field is required for each doctoral program. The dissertation must demonstrate a candidate's ability to think independently and to present results coherently. Furthermore, the dissertation is to be a demonstration of a candidate's creativity and imagination.

While working on the proposal, the student is required to enroll in departmental prefix 797 "Doctoral Proposal Research." Although the student may register for 1-4 semester hours of proposal research in any semester, he/she must earn a minimum/maximum of four semester hours of credit for dissertation proposal research before submission of the dissertation proposal.

A copy of the dissertation proposal bearing the signatures of all research committee members must be filed with the Graduate School no later than two weeks (14 calendar days) before the end of the semester preceding the semester that the student expects to

graduate. The Graduate School will not officially accept the proposal until the student also files a non-plagiarism affirmation form. Students must also provide each member of the research committee with a copy of the proposal.

Specific requirements and suggestions regarding the proposal and the dissertation are detailed in the current issue of the *Thesis and Dissertation Manual*, which may be purchased at the UNC Bookstore.

Students may not register for departmental prefix 799 "Doctoral Dissertation" until admitted to candidacy.

Dissertation Defense

When the research advisor believes the dissertation is ready for defense, the following steps will be taken.

1. In conjunction with the research committee, the doctoral candidate must arrange for the date, time, and place of the defense. The defense must occur at least five weeks (35 calendar days) before graduation.

2. At least three weeks (21 calendar days) before the scheduled defense, the research advisor, who will serve as chairperson of the research committee, must notify the Graduate School of the date, time, and place of the defense.

3. At least three weeks (21 calendar days) before the defense, the doctoral candidate must submit a copy of his/her dissertation to the Graduate School and to each member of the research committee. The copies submitted must be in the form specified by the department/division and the Graduate School.

4. The Graduate School will approve and publicize the defense in *UNC REPORT* or in a bulletin published by the Graduate School.

All members of the 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 Graduate Council requires that the all-university faculty representative to the committee must be present at all dissertation defenses.

If a candidate passes the defense, the research advisor shall obtain the signatures of the research committee members on the "Report of Defense of Dissertation" form and submit the form to the Graduate School. The 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 meets 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, 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, 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.

Filing the Dissertation

If a candidate makes the dissertation corrections required by the research committee and if the dissertation is signed by all or all but one of the research committee members, the candidate may file the dissertation with the Graduate School. Filing the dissertation involves the submission of the original and three copies of the corrected dissertation. 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 four weeks (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; one copy will be sent to the candidate.

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 his/her designee will ask the non-signing member if he/she wishes to enter a formal objection(s). If a formal objection is filed, the Dean of the Graduate School will appoint a review committee to assess the specific objection(s) of the dissenting dissertation committee member. If the review committee rules that the objection(s) does not justify the rejection of the study, the chairperson of the review committee will sign the dissertation in place of the dissenting faculty member. If the review committee rules that the objection(s) is valid, the 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.)

Doctoral Hooding

The candidate's research advisor shall hood the candidate at the graduation ceremony.

Costs and Financial Aid

In-State and Out-of-State Classification.....	45
Rates.....	45
Paying Student Account	46
Student Financial Resources	47

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.

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 10 class days after 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 two weeks 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 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 1988-89 academic year. Rates for the 1989-90 academic year, which begins with fall semester, 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 351-2201, after June 15 of each year.

1988-89 In-State Student Tuition

(Colorado Resident Status)		
Per Semester Credits Taken	Under-graduate	Graduate
5 credit hours or less, tuition and fees per credit hour	\$ 34	\$ 41
5.5-9.5 credit hours, tuition per credit hour	\$ 67	\$ 78
10-18 credit hours, total tuition	\$668	\$783
Surcharge per credit hour for credits above 18 hours	\$ 45	\$ 52

1988-89 Out-of-State Student Tuition

(Not Qualified for Resident Student Status)		
Per Semester Credits Taken	Under-graduate	Graduate
9.5 credit hours or less, tuition per credit hour	\$ 196	\$ 208
10-18 credit hours, total tuition	\$1,958	\$2,084
Surcharge per credit hour for credits above 18 hours	\$ 131	\$ 139

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.

General Fees

Per Semester	
9.5 hours or less, per credit hour	\$ 14
10 or more credit hours	
Student service fees	\$143
Health insurance fee	\$161
Total	\$304
Optional CoPIRG fee *	\$ 3

* 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.

Division of Statewide Programs Tuition and fees charged to students enrolled in off-campus extension classes, external degree programs, and programs at CCHE-designated access sites, offered through the Division of Statewide Programs, differ from on-campus charges and are subject to the Colorado Commission on Higher Education Extended Studies policies. Information on current charges is available from the Division of Statewide Programs, Frasier Hall 11, University of Northern Colorado, Greeley, Colorado 80639, phone 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 21, living on campus, are required to carry a 19-meals per week food plan. All other residents of Central Campus, McCowen and Harrison residence halls must carry a 15- or 19-meals per week food plan. If space is available, any residence hall bedroom can be rented as a single unit for an additional charge.

The following rates relate to the 1988-89 academic year. Rates for the 1989-90 academic year, which begins with fall semester, are not available as of the publication of this document.

Semester Room and Board Rates

Freshmen Under Age 21 (w/19-meals per week plan)

Halls other than Lawrenson, Turner (\$638 rm + \$838 bd)	\$1,476
Turner Apartments (\$693 rm + \$838 bd)	\$1,531

All Other Student Residents

Halls other than Lawrenson, Turner (w/19 mpw plan)	\$1,476
or w/15 meals per week, Mon-Fri (\$638 rm + \$740 bd)	\$1,378

Semester Room-Only Rates

Turner Apartments (per person)	\$693
Lawrenson Apartments (per person)	\$780
Harper and Warren Graduate Women's Houses (per person)	\$435
Student Family Apartments (per month) ...	\$288

Semester Optional Meal Plans

Our facilities on campus provide convenience, economy and selection. Varied entrees, salad bars and beverage, dessert and cereal selections are available daily. Computerized access allows contract holders to dine in any dining room or in the court at the University Center.

Housing/Food Service offers 10 meal plan choices to residents of Lawrenson, Turner (excluding freshmen under age 21), Student Family Apartments and off-campus students.

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. These fees relate to specific majors and courses that have extraordinary costs associated with them, e.g., class materials.

Also, fees are assessed for placement 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 MAKE OTHER ARRANGEMENTS IN ACCORDANCE WITH UNIVERSITY POLICY AND APPROVED BY THE APPROPRIATE AUTHORITIES. The student is required to pick up his/her Statement of Account and Change of Address form in the East Ballroom of the University Center. *This bill is NOT mailed to the student.*

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 Registrar's Office of their intent before the first class day to avoid the 15 percent assessment.

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 in various residence halls).
- 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 as explained in the "Expenses" section. 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).
- 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).

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 351-2201.

THE UNIVERSITY OF NORTHERN COLORADO WILL NOT REGISTER A STUDENT, RELEASE A DIPLOMA, PROVIDE A TRANSCRIPT, OR SUPPLY PLACEMENT 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.

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-\$99	\$ 5.00
100-199	7.50
200-299	10.00
300-399	12.50
400-499	15.00
500-599	17.50
600-699	20.00
700-799	22.50
800-899	25.00
900 and up	27.50

Fee for Deferral of Payment

Under certain circumstances, a student who qualifies may make arrangements with the Accounts Receivable Office (Carter Hall, Main Floor, phone 351-2201) to defer payment of a portion of the total current expense for tuition, fees, and other charges. These arrangements must be made before the date that late payment penalties are imposed. The student must pay 1/3 of the total current bill plus a deferral fee on the amount deferred 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, registration for the subsequent term will be cancelled, and any financial aid offers will be withdrawn.

The extension of this privilege requires the assessment of a one-time flat fee in accordance with the following schedule.

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
1,200-1,299	17.50
1,300 & over	20.00

Fee for Re-Registration of Classes

Students who have not paid tuition, fees, and other charges or made arrangements for a deferral of 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 arrangement of a satisfactory deferral, plus payment of an additional \$100 re-registration charge. 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.

Withdrawals, Drops, or Cancellation from Classes

The following summarizes the policies and procedures that reassessments and refunds are processed for the regular fall and spring semester classes. If a more complete explanation is required or if individual refund circumstances warrant review, contact the Director of Accounting Services, Carter Hall 1002, phone 351-2237.

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 cancelled from all classes due to non-payment. In these instances, the student is assessed a percentage of the tuition and fee costs based on the date of the action as follows:

Number of Class Days	Percentage of Tuition and Fees Assessed
1-5	15%
6-10	15%
11-15	15%
16-20	40%
21-25	50%
26	100%

To withdraw from the University, a student must complete a Withdrawal Clearance form. This form is obtained from the Academic Advising Center, University Center, phone 351-1391.

Students with room and board are assessed amounts based upon rates, policies, and procedures explained in the Housing/Food Service contractual materials. The Housing/Food Service Office, Gordon Hall, phone 351-2721, will provide assistance and information upon request.

The following fees are not refunded for any cause at any time: Bookstore charges, deferral, graduation, health insurance, housing damages, ID card replacement, lab equipment not returned, late payment, library fines, lost athletic equipment, lost library books,

matriculation, parking fines, short check service charges, unpaid short term loan.

If a more complete explanation of the above policies is required or if individual circumstances warrant review, contact the Director of Accounting Services, Carter Hall 1001, phone 351-2237.

Student Financial Resources

Financial aid is awarded to assist students and parents to meet 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 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 Stafford (formerly Guaranteed Student Loan), Parents Loan for Undergraduate Students (PLUS), Supplemental Loan for Students (SLS). Eligibility for Perkins/Direct loans and Stafford loans is based upon need, as determined by American College Testing Service.

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, 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 the fall.

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 prefers the analysis to be done by the American College Testing Service (ACT). However, UNC will accept a Financial Aid Form (FAF) from College Scholarship Service as well.

The ACT application, Family Financial Statement (FFS) can be obtained from most college and high school guidance counselor's offices. The student must carefully complete the FFS and mail it to the Need Analysis Service. 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 FFS 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 student must contact the office for the deadline for submission of this application. 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 state loans, contact the lending institution (bank or credit union) for an application. UNC has a list of participating institutions. Students are urged to submit the completed loan application to the office no later than May 1 preceding the award year to assure timely receipt of funds.

The Award

Financial aid is awarded on the basis of "need" and usually includes a package of grants, loans, and employment. Funding is available normally at the beginning of each semester, as a credit to charges on the student's bill and a "net" check for books and other educational costs.

Students and parents are expected to contribute their share towards 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 an application and further details.

Renewal for financial aid is not automatic. An FFS must be completed and mailed by March 1 preceding each award year that aid is requested. The student's academic progress as well as financial need determines the continuance of funding. Copies of the UNC Satisfactory Academic Policy Statement can be obtained in the office.

Additional questions can be answered by contacting the Office of Student Financial Resources at (303) 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, please refer to the Standards of Satisfactory Academic Progress available in the Office of Student Financial Resources.

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*.

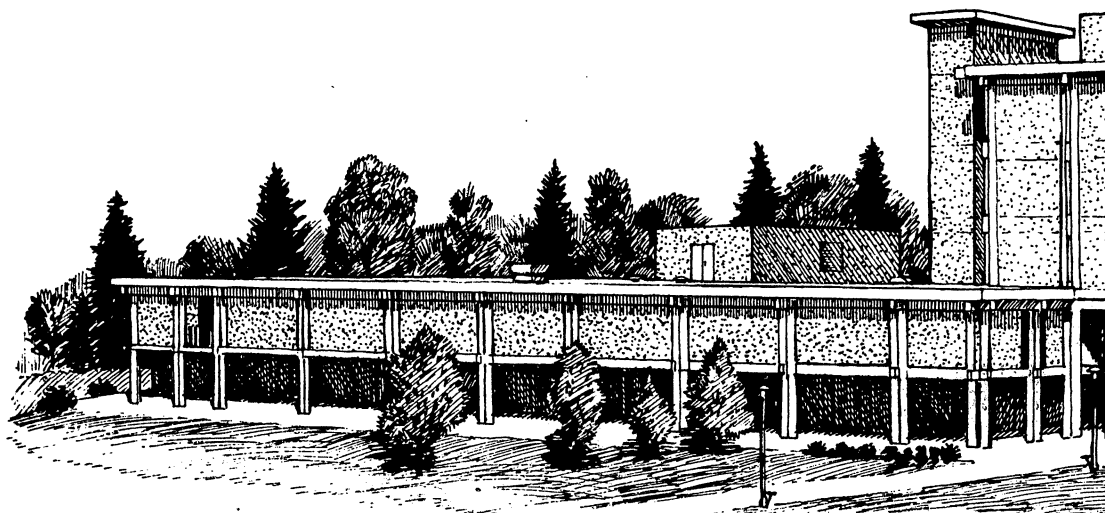
Repayment Policy

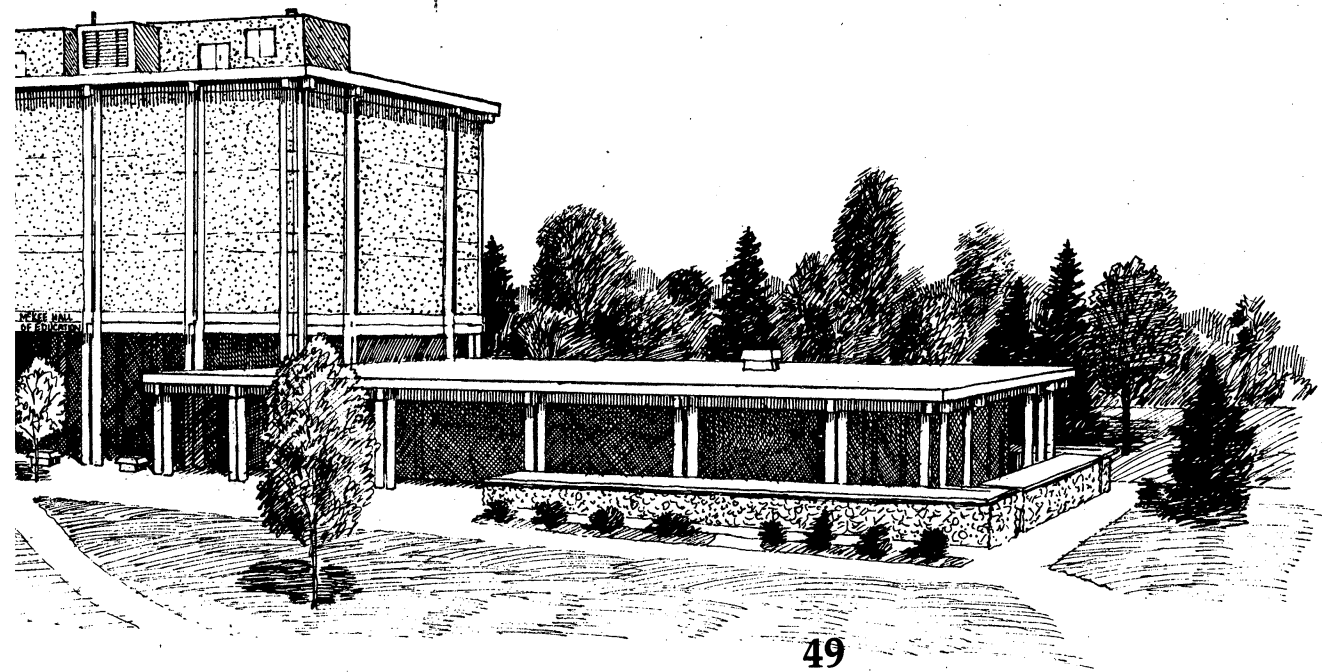
Any student withdrawing totally from the University, who has received his or her financial aid for that semester, will be required to repay the financial aid received. For more detailed explanation of these policies, refer to the Refund/Repayment policies available in the Office of Student Financial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

II

Programs of Study

Arts and Sciences.....	50
Business Administration.....	130
Education.....	140
Health and Human Services.....	180
Human Performance and Leisure Studies.....	200
Performing and Visual Arts.....	218





College of Arts and Sciences

Anthropology.....	55	Journalism and Mass Communications	90
Biological Sciences.....	56	Latin American Studies (see Hispanic Studies)	
Black Studies.....	61	Mathematics.....	92
Chemistry	62	Medical Technology	97
Communication (see Speech Communication)		Meteorology (see Earth Sciences)	
Earth Sciences.....	68	Mexican American Studies (see Hispanic Studies)	
Economics	71	Philosophy.....	98
Elementary Education: Bilingual Bicultural Endorsement (See Spanish)		Physical Science	99
English	72	Physics.....	99
Environmental Studies	75	Political Science.....	103
Foreign Languages (see French, German, Spanish)		Pre-Engineering (see Physics)	
French.....	76	Pre-Health (see Chemistry)	
Geography	79	Pre-Law (see Political Science)	
Geology (see Earth Sciences)		Psychology.....	104
German.....	82	Social Science.....	106
Health Sciences, Pre-Professional Studies (see Chemistry)		Sociology.....	109
Hispanic Studies.....	84	Spanish.....	112
History.....	85	Speech Communication.....	116
Interdisciplinary Studies.....	87	Teaching English as a Second Language.....	122
International Trade and Relations (see Interdisciplinary Studies)		Women's Studies	123
		Minors	124

Location: Michener L54
Telephone: 351-2707
Roger A. Kovar, Dean
John K. Gapter, Associate Dean
Maria E. Lopez, Assistant 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 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 photography lab, the math lab, and the psychology lab.

Department of Anthropology, Black Studies and Women's Studies

Location: Candelaria Hall 12
Telephone: 351-2021
Michael J. Higgins, Chair

Anthropology

Professors — Michael J. Higgins, PhD, George E. Fay, PhD

Associate professor — James Wanner, PhD

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 world perspective.

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

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

Black Studies

Location: Candelaria 12
Telephone: 351-2021
Hermon George, Jr., Coordinator

Associate professor — Hermon George, Jr., PhD

Assistant professor — Anthonia C. Kalu, PhD

The Black Studies Program 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, not reducible to anything else that expresses the black experience and recognizes that the common heritage and common struggle of people of African descent often are inadequately or inappropriately examined.

As an academic discipline, the black studies curriculum is divided into four foci: historical, social-psychological, political-economic, and philosophical-religious-aesthetic. The historical focus presents courses, that follow the paths of people of African descent from the African

continent into the New World; topics such as nationalism, scientific achievement, and slavery are studied. The social-psychological focus offers courses that deal with social, psychological, and behavioral patterns that characterize the black experience; topics studied include black identity formation and the effects of racism, the family, and the social scientific study of black communities.

The political-economic focus contains courses that seek to assess the interaction between black socioeconomic experience, and the larger domestic or global framework in which it has occurred; labor market experience, entrepreneurial initiatives, underdevelopment, and ideology illustrate some of the topics addressed. The philosophical-religious-aesthetic focus provides courses whose principal aim is to reveal the aesthetic sensibilities and cultural ethos contained in the works of black writers, artists, leaders, and communities; topics include the study of dramatic expression, literature, and music. Its courses also demonstrate that peoples of African descent have responded historically to a specific set of concerns about the world; topics studied include worldviews and the nature of social commitment and social gospel.

Women's Studies

Location: Candelaria Hall 12
Telephone: 351-2021
Marcia Willcoxon, Coordinator

Professor — Marcia Willcoxon, MA

The basic goals of the Women's Studies Program and course offerings are to explicate, understand and overcome social myths about women and sex role stereotypes of women and men. This is done in order to enhance the dignity of all human beings and to provide unique opportunities for knowledge and understanding for students going into teaching and school administration and into a wide variety of other professional careers.

Department of Biological Sciences

Location: Ross Hall 234
Telephone: 351-2921
James P. Fitzgerald, Chair

Professors — Richard R. Bond, PhD, Warren R. Buss, PhD, James P. Fitzgerald, PhD, John K. Gapter, PhD, William E. Harmon, PhD, Margaret Heimbrook, PhD, Ivo E. Lindauer, PhD, E. Edward Peebles, PhD, Ronald K. Plakke, PhD, Royal A. Rich, PhD, Edmund A. Richards, PhD, Gerald D. Schmidt, PhD

Associate professor — Charles Olmsted III, PhD

Assistant professors — April Gardner, PhD, Bruce Woodward, PhD, Louise Zitnik, 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, laboratory 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 small project 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, human genetics, parasitology, plant and animal ecology, mammalogy, ornithology, pharmacology, plant and mammalian physiology and anatomy and science education.

Department of Chemistry

Location: Ross Hall 138
Telephone: 351-2559
Marcus K. Meilahn, Chair

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

Associate professor — Richard M. Hyslop, PhD

Assistant professor — Richard W. Schwenz, 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 course work 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 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. A reasonable amount of instrumentation is currently in 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.

At the graduate level, most degree programs require research. The results of a 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 332

Telephone: 351-2647

William D. Nesse, Chair

Professors — L. Glen Cobb, PhD, Richard D. Dietz, PhD, Jay K. Hackett, EdD, K. Lee Shropshire, PhD, Leslie W. Trowbridge, PhD

Associate professors — Kenneth D. Hopkins, PhD, William H. Hoyt, PhD, William D. Nesse, PhD

The earth sciences (astronomy, geology, meteorology and oceanography) explore questions concerning the solid earth, the oceans, the atmosphere, the solar system, and the universe beyond. The department is multidisciplinary and students may select a program that focuses on a particular discipline or one that provides a broad background encompassing several disciplines.

Department of Economics

Location: Michener L130

Telephone: 351-2739

John W. Green, Chair

Associate professors — James F. Anderson, PhD, John W. Green, PhD, Marie L. Livingston, PhD

Assistant professors — Ann J. Garrison, MA, Patricia E. Graham, 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: 351-2971

Lloyd D. Worley, Chair

Professors — John Brand, PhD, Wanda Brewer, EdD, James Doyle, MFA, John Harrison, PhD, Rita Kiefer, MA, John Loftis, PhD, Doris Myers, PhD, Norman Peercy, PhD, Tomas Santos, PhD, Sharon Wilson, PhD

Associate professors — William Agan, MA, Edward Kearns, MA, Joyce Lackie, PhD, Jeane Luere, MA, Kathleen Manley, PhD, Charles Meyer, MA, Walter Princic, PhD, Paul Rea, PhD, Ben Varner, PhD, Lloyd D. Worley, PhD

Assistant professors — Barbara A. D. Findley, PhD, Joonok Huh, PhD, Craig Smith, PhD

The discipline of English studies 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 list is infinite.

The study of literature and language requires both rigorous discipline and sensitivity: 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: 351-2040

Kathleen Y. Ensz, Chair

Professors — Glenda Brown, PhD, Kathleen Ensz, PhD

Associate professor — David Caldwell, PhD, Frank Keppeler, MA

Assistant professor — Susanne B. Rinne, MA

The department has two tracks — one for lower division students with at least some background in the language, and the other for majors and minors with at least the background of FR 202 or GER 202 or the equivalent.

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 skillbuilding 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 a study-abroad program 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.

The master's program is especially designed for those desiring to pursue a career in teaching, as it stresses the language and culture of the country as well as providing the opportunity to apply this knowledge in a practical manner through numerous methodology courses.

The program combines this core of courses in language and methodology with a smaller core of interdisciplinary courses from programs such as education, history, media and visual arts in order to give the student a broader base of knowledge in these related fields, as well as a greater expertise in their major language.

In addition to the classroom program during the academic year, a series of workshops or institutes is offered to provide the student an intensive immersion experience during several weeks of the summer. 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.

An additional language experience in the target country is provided in our Study Abroad Program. A student may be either a participant or an assistant to the professor accompanying the group.

Department of Geography

Location: Candelaria 214
Telephone: 351-2715
Charles O. Collins, Chair

Professors — David B. Cole, PhD, John L. Dietz, PhD, Kevin C. Kearns, PhD, Paul L. Lehrer, PhD, Richard K. Ormrod, PhD

Associate professors — Charles O. Collins, PhD, Steven L. Scott, DA

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 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 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: 351-2811
Lynn A. Sandstedt, Chair

Professors — Maria E. Lopez, PhD, Alfonso Rodriguez, PhD, Lynn A. Sandstedt, PhD

Associate professors — Roberto H. Cordova, PhD, Ester Gimbernat de Gonzalez, PhD, Carlos Leal, EdS, Teresa B. Rodriguez, PhD

Assistant professor — James K. Bachmann, 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 methodology, 20th century Spanish theater, Colorado Chicano history, Southwest linguistics, and bilingual educational materials.

Department of History

Location: Michener L97
Telephone: 351-2905
Barry Rothaus, Chair

Professors — Benjamin Byerly, PhD, Alfred Cornebise, PhD, Ronald Edgerton, PhD, Robert Larson, PhD, Stephen Powers, PhD, Barry Rothaus, PhD, Gail Rowe, PhD, Janet Worrall, PhD

Associate professors — Marshall Clough, PhD, Alexander Knott, PhD

Assistant professors — Daniel J. Moran, PhD, Joan A. Pratt, 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: 351-2726
Mort Stern, Chair

Professor — Mort Stern, PhD

Associate professors — David L. Anderson, MA, Wayne W. Melanson, PhD

Assistant professors — John C. Bromley, MA, Robert A. Hess, MA, Charles Ingold, PhD, Donna G. Logan, MA, Patrick J. McCarthy, PhD

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 four emphases: news-editorial, telecommunications, public relations, and advertising. Professionally-experienced, academically-qualified faculty members in each sequence provide opportunities for instruction and skills enhancement. Modern facilities include a closed-circuit radio station, a color TV studio, and photography labs with both color and black-and-white capability.

Department of Mathematics and Applied Statistics

Location: Ross 322
Telephone: 351-2820
Samuel R. Houston, Chair

Professors — William W. Bosch, PhD, Timothy D. Cavanagh, PhD, Donald D. Elliott, PhD, Robert L. Heiny, PhD, Samuel R. Houston, PhD, Charles R. Mc Nerney, PhD, William D. Popejoy, EdD, Joan Richardson, PhD, Rex R. Schweers Jr., MA, Donald T. Searls, PhD, Robert A. Tolar, PhD

Associate professors — J. Wey Chen, PhD, Fred K. Rumford, MS, Igor Szczyrba, PhD

Assistant professors — William L. Blubaugh, PhD, Christopher S. Cotter, PhD, Peter C. Isaacson, PhD, Steven C. Leth, PhD, Terry A. Scott, PhD, Ann Thomas, 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: Michener L130
Telephone: 351-2572
Jack Temkin, Chair

Associate professors — Richard A. Blanke, PhD, Paul F. Hodapp, JD, 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 43
Telephone: 351-2961
Robert G. Hamerly, Chair

Professors — Wallace Aas, MA, Willard L. Fadner, PhD, Richard K. Fry, PhD, Robert G. Hamerly, PhD

Assistant professor — Robert A. Walch, 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 his/her 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 senior projects under faculty guidance. These investigations often extend over several quarters or are included in 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 a machinist are available to help with classroom needs, as well as in special projects and research. Computer terminals and microcomputers are available.

A well-equipped nuclear laboratory features a neutron howitzer, radioactive materials, a precise Ge(Li) gamma ray detector 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 (Energy and the Environment, Reactors and Radiation, Solar and Alternative Sources). Also offered are special-topic courses related to light and sound, the mechanics of sports and dance, the status and origins of the universe (using recent films or videotapes such as *Cosmos*), theories of the submicroscopic structure of matter, the impact of science on society, the *Ascent of Man*, and survey courses in physical science.

Department of Political Science

Location: Michener Hall L130
Telephone: 351-2058
John T. Bookman, Chair

Professors — John T. Bookman, PhD

Associate professor — Steve J. Mazurana, MA

Assistant professors — Chris Carr, PhD, John C. Domino, PhD

Today, no less than in the past, to be a useful citizen you should know something about the political system in which you will spend your life. As an educated person you should know something about the nature of politics and government.

Political science is the study of political and governmental procedures by which decisions are taken and laws, regulations, programs and public policies are made. Some would say politics is the science of who gets what, when and why. Political science is characterized by widespread and determined efforts to collect and analyze data about politics and government, utilizing the techniques developed by all the social sciences. Political scientists are interested in the origins of government and political life, justice, liberty, equality, war and peace, the evolution and decline of political systems, the content of public policies, and how governments solve their society's conflicts.

Department of Psychology

Location: Candelaria Hall 30
Telephone: 351-2957
Charles S.L. Poston, Chair

Professors — Bill R. Brown, PhD, Grant L. Morris, PhD, Charles S.L. Poston, PhD

Associate professors — William A. Barnard, PhD, William J. Hudspeth, PhD, John/Juan Ramirez, PhD

Assistant professors — Mark B. Alcorn, PhD, Roberta N. Chinn, PhD, Alfred H. Karney, MS, Susan Plock-Bromley, PsyD, Paul D. Retzlaff, PhD, Eugene P. Sheehan, 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: 351-2315
John A. Vonk, Chair

Criminal Justice Office

Location: Candelaria Hall 226
Telephone: 351-2107
Philip Reichel, Director

Family Studies Office

Location: Candelaria Hall 232
Telephone: 351-2421
Pamela G. Hewitt, Director

Professors — Richard G. Trahan, PhD, John A. Vonk, PhD

Associate professors — Carol R. R. Andreas, PhD, John Fox, PhD, Pamela G. Hewitt, PhD, Karen Jennison, PhD, Zahi Kamal, PhD, James Marshall, PhD, David Musick, PhD, Philip Reichel, PhD, Gary Willoughby, MA

Assistant professors — Todini Bacigalupi, PhD, Daniel O'Connor, PhD, Jacqueline Stanfield, PhD

Sociology, as the study of social relations and institutional arrangements, is fundamental to the social sciences. Undergraduate courses are designed to prepare students with basic principles, theories, and methods of sociology. The course work is arranged so that students may emphasize general sociology, criminal justice or family studies.

Department of Speech Communication

Location: Candelaria Hall 121
Telephone: 351-2045
Robert Ross, Chair

Professor — Richard J. Crawford, PhD

Associate professors — Glenn W. Clatterbuck, PhD, Idahlynn Karre, PhD, Martin Remland, PhD, Robert Ross, PhD, Dennis Warnemunde, PhD, Julie Yingling, PhD

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

Minor in Anthropology: 18 semester hours

Program Requirements

Complete the anthropology courses specified here	6
Complete the program electives indicated here	12

The anthropology minor consists of three options, or concentrations: cultural anthropology, physical anthropology, and anthropological archaeology. Each focuses on using anthropological techniques to understand the human condition and on applying anthropological understanding to the fields of education, health and human services, planning and management, or intercultural training.

In cultural anthropology, students will learn techniques for cultural analysis, e.g., participant observation, interviewing, and interpreting cultural data. In physical anthropology, students will apply statistical techniques to understanding problems of human variability and adaptation to environment. In archaeological anthropology, students will learn excavation techniques and how to analyze and interpret archaeological materials.

The deepest form of anthropological understanding comes from *doing* anthropology. Minors will be prepared to use the theories and methods of their concentration in their major. The tools of cultural analysis help solve problems in human relations and encourage healthy social environments. The biological-cultural focus of physical anthropology is relevant to professional training in health and human services, environmental studies, and physical education. Archaeological anthropology provides future historians a prehistoric perspective on humanity and trains them in cultural analysis of prehistoric materials.

Students may tailor an interdisciplinary major by combining an anthropology minor with 42 or more semester hours of courses selected in accordance with the regulations of the Interdisciplinary Program.

Required Courses (all concentrations) — 6 semester hours

ANT 100 General Anthropology	3
Select <i>one</i> of the following:	
ANT 408 Workshop in Anthropology	3
ANT 470 Seminar in Anthropology.....	3
ANT 480 Theory and Practice in Anthropology.....	3
ANT 492 Internship	3

Concentration in Cultural Anthropology — 12 semester hours

Required Courses — 6 semester hours

ANT 110 World Cultures	3
ANT 210 Studying Cultures.....	3

Elective Courses — 6 semester hours

Select *one* of the following:

ANT 310 World Area Studies.....	3
ANT 311 Ethnology of Hispanic Peoples	3
ANT 312 American Indians	3
ANT 313 Modernization and Development	4
ANT 314 Sex Roles in Cultural Perspective	3
ANT 315 Culture and the Human Lifecycle.....	3
ANT 490 Anthropology of Organizations	3
Select one elective from the Archaeology or Physical concentrations:	3

Concentration in Archaeology — 12 semester hour

Required Courses — 6 semester hours

ANT 120 World Archaeology	3
ANT 220 Archaeological Techniques	3

Elective Courses — 6 semester hours

Select *one* of the following:

ANT 321 New World Archaeology	3
ANT 323 The Origins of Civilization	3
ANT 324 Archaeology of Colorado and the Southwest	3
Select one elective from the Physical or Cultural Concentrations:	3

Concentration in Physical Anthropology — 12 semester hours

Required Courses — 6 semester hours

ANT 130 Human Evolution.....	3
ANT 230 Anthropometrics	3

Elective Courses — 6 semester hours

Select *one* of the following:

ANT 316 Culture, Biology and Health	3
ANT 331 Human Population Biology.....	3
Select one elective from Cultural or Archaeology Concentrations:.....	3

Bachelor of Arts in Biological Sciences

Emphasis in Field Biology

Program Requirements

Complete the biological sciences courses specified here.....	26
Complete the supporting courses specified here	9
Complete program electives indicated here	30
Complete General Education and electives to total.....	120

This program places heavy emphasis on organismal biology and on field courses. Students completing the program will acquire a stronger 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 Divisions of Wildlife, 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 Courses — 35 semester hours

<i>Biological Science — 26 semester hours</i>	
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 Support Courses — 9 semester hours

CHEM 111 Principles of Chemistry I.....	5
CHEM 131 Introductory Organic Chemistry.....	4
Note — Some of the required courses in chemistry, physics, mathematics/ statistics and earth sciences will apply toward the general education requirement.	

Elective Courses — 30 semester hours

<i>Biological Science—Organismal — 9 semester hours</i>	
BIO 351 Microbiology	4
BIO 380 Aquatic Biology	4
BOT 333 Morphology 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
<i>Biological Science, Free Electives — 4 semester hours</i>	
<i>Physics or Mathematics — 10 semester hours</i>	
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
MATH 124 College Algebra	3
MATH 125 Plane Trigonometry	3
MATH 131 Calculus and Analytic Geometry I.....	4
Note — It is recommended that students complete either PHYS 220 and PHYS 221 or MATH 124, MATH 125 and MATH 131	
<i>Mathematics/Applied Statistics/Computer Science — 3 semester hours</i>	
CG 105 Personal Computer Applications.....	3
STAT 201 Introduction to Statistical Analysis	3
<i>Earth Science — 4 semester hours</i>	
GEOL 100 General Geology.....	4
MET 205 General Meteorology	4

Bachelor of Arts in Biological Sciences

Emphasis in Human Biology

Program Requirements

Complete the biological sciences courses specified here.....	38
Complete the supporting courses specified here	29
Complete program electives indicated here	9
Complete General Education and electives to total.....	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, and pharmaceutical sales.

Required Courses — 67 semester hours

<i>Biological Sciences Courses — 38 semester hours</i>	
BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5
BIO 191 Biology as a Profession Seminar	0.5
BIO 200 Genetics	3
BIO 351 Microbiology	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 Support Courses — 29 semester hours

<i>Chemistry — 19 semester hours</i>	
CHEM 111 Principles of Chemistry I.....	5
CHEM 112 Principles of Chemistry II.....	4
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
<i>Physics — 10 semester hours</i>	
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
Note — Some of the required courses in chemistry, physics, and mathematics/ statistics will apply toward the general education requirement.	

Elective Courses — 9 semester hours

<i>Biological Science — 6 semester hours</i>	
Select from BIO, BOT, or ZOO prefixes.....	6
<i>Mathematics/Applied Statistics/Computer Science — 3 semester hours</i>	
MATH 124 College Algebra	3
or	
MATH 125 Plane Trigonometry	3
or	
a higher level mathematics course	3
STAT 301 Statistics for Health Sciences.....	3

Bachelor of Arts in Biological Sciences

Emphasis in Laboratory Biology

Program Requirements

Complete the biological sciences courses specified here.....	41
Complete the supporting courses specified here.....	32
Complete program electives indicated here.....	6
Complete General Education and electives to total.....	120

This program emphasizes the development of laboratory and analytical skills and carries the heaviest requirement in biological sciences at UNC of support courses in science and mathematics. Students should have an interest in working in research or industrial laboratories, including medical, microbiology or biotechnology laboratories. They should have a strong science and mathematics background in high school.

Students successfully completing this program will meet the entrance requirements of most professional schools of medicine or be able to continue their education in graduate programs in the biological sciences (microbiology, mycology, parasitology, histology). They will also be qualified for work in industrial and various research laboratories, in medicine, microbiology, and biotechnology.

Required Courses — 73 semester hours

<i>Biological Science — 41 semester hours</i>	
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	2
BIO 450 Cell Physiology.....	4
BIO 491 Senior Seminar.....	0.5

BOT 333 Morphogenesis of Algae and Fungi.....	4
BOT 440 Anatomy and Morphogenesis of Plants	4
ZOO 333 Parasitology	3
ZOO 345 Comparative Vertebrate Morphogenesis	4
ZOO 448 Histology/Microtechnique	3

Required Support Courses — 32 semester hours

<i>Chemistry — 19 semester hours</i>	
CHEM 111 Principles of Chemistry I.....	5
CHEM 112 Principles of Chemistry II.....	4
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II.....	5
<i>Physics — 10 semester hours</i>	
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
<i>Mathematics/Applied Statistics/Computer Science — 3 semester hours</i>	
MATH 125 Plane Trigonometry	3
Note — Some of the required courses in chemistry, physics, mathematics/statistics and earth sciences will apply toward the general education requirement.	

Elective Courses — 6 semester hours

<i>Sciences — 3 semester hours</i>	
Select from courses with BIO, BOT, ZOO, or CHEM prefix.....	3
<i>Mathematics/Applied Statistics/Computer Science — 3 semester hours</i>	
CG 105 Personal Computer Applications.....	3
STAT 201 Introduction to Statistical Analysis I.....	3

Bachelor of Arts in Biological Sciences

Emphasis in Liberal Arts

Program Requirements

Complete the biological sciences courses specified here.....	20
Complete the supporting courses specified here.....	23
Complete program electives indicated here.....	20
Complete General Education and electives to total.....	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 should have an interest in the biological sciences but without a specific employment goal upon receipt of the bachelor's degree. They should meet with an advisor for specific requirements and direction.

Students will have a broad preparation in the biological sciences with skills 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 Courses — 43 semester hours

<i>Biological Science — 20 semester hours</i>	
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
<i>Chemistry — 9 semester hours</i>	
CHEM 111 Principles of Chemistry I.....	5
CHEM 131 Introductory Organic Chemistry.....	4
<i>Physics — 5 semester hours</i>	
PHYS 220 Introductory Physics I.....	5

<i>Mathematics/Applied Statistics/Computer Science — 5 semester hours</i>	
MATH 124 College Algebra	3
or	
a higher level mathematics course	3
SCI 391 Computer Applications in Science.....	2
<i>Earth Science — 4 semester hours</i>	
GEO 100 General Geology.....	4
Note — Some of the required courses in chemistry, physics, mathematics/statistics and earth sciences will apply toward the General Education requirement.	

Elective Courses — 20 semester hours

<i>Biological Science—Organismal — 9 semester hours</i>	
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
<i>Biological Science-Anatomy/Physiology — 7 semester hours</i>	
BIO 450 Cell Physiology.....	4
BOT 350 General Plant Physiology	4
BOT 440 Anatomy and Morphogenesis of Plants.....	4
ZOO 245 Introduction to Human Anatomy and Physiology	4
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4
Note — Credit not allowed for ZOO 245 and ZOO 350	
<i>Biological Science-Free Electives — 4 semester hours</i>	
Select from BIO, BOT or ZOO prefix.	

Bachelor of Arts in Biological Sciences

Emphasis in Teaching-Secondary Biology

Program Requirements

Complete the biological sciences courses specified here.....	43
Complete the supporting courses specified here	26
Complete program electives indicated here	9
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

This program leads to State of Colorado certification 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 certification 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 Courses — 69 semester hours

<i>Biological Science — 43 semester hours</i>	
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 465 Evolution.....	3
BIO 460 Ecology.....	4
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

<i>Chemistry — 9 semester hours</i>	
CHEM 111, Principles of Chemistry I.....	5
CHEM 131 Introductory Organic Chemistry.....	4
<i>Physics — 10 semester hours</i>	
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
<i>Mathematics/Applied Statistics/Computer Science — 3 semester hours</i>	
MATH 124 College Algebra	3
<i>or</i>	
a higher level mathematics course	3
<i>Earth Science — 4 semester hours</i>	
GEOL 100 General Geology.....	4
Note — Some of the required courses in chemistry, physics, mathematics/statistics and earth sciences will apply toward the General Education requirement.	

Elective Courses — 9 semester hours

<i>Biological Science — 2 semester hours</i>	
Select from BIO, BOT or ZOO prefix	2
<i>Earth Sciences — 4 semester hours</i>	
AST 100 General Astronomy	4
GEOL 201 Physical Geology.....	4
MET 205 General Meteorology	4
<i>Mathematics/Applied Statistics/Computer Science — 3 semester hours</i>	
MATH 125 Plane Trigonometry	3
STAT 201 Introduction to Statistical Analysis I	3

Note

Completion of PTE is necessary for this program.

Master of Arts in Biological Sciences

Emphasis: Non-Thesis

Program Requirements

Complete the required courses specified here.....6

Complete program electives specified here24

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 in the biological sciences and gain some experience in research methodology. They may also improve their understanding of the support sciences and science pedagogy.

Prerequisites

Students should have completed a minimum of one year of biological science and one year of chemistry before admission to the program.

Required Courses — 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 — Results of Graduate Research must be presented orally to the biological sciences faculty.

Elective Courses — 24 semester hours

Basic Electives — 10 semester hours minimal requirement.

BIO 525 Molecular Genetics 2

BIO 550 Cell Physiology..... 4

BOT 530 Plant Taxonomy 4

BOT 533 Morphogenesis of Algae and Fungi..... 4

BOT 540 Anatomy/Morphogenesis of Plants 4

BOT 550 Plant Physiology 3

ZOO 533 General Parasitology..... 4

ZOO 534 Mammalogy 4

ZOO 535 Survey of Fishes, Amphibians, and Reptiles..... 4

Note — All of the above courses are double numbered.

Advanced Study Electives — 8 semester hours minimal required.

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

BIO 501 Current Issues in Biology (summer only) 1

BIO 508 Workshop in Biology (summer, interim session)..... 0.5-6

BIO 513 Professional Enrichment (summer, interim session)..... 1-10

BIO 585 Topics in Field Biology (summer, interim session)..... 1-10

BIO 592 Internship in Biological Science 1-3

BIO 595 Special Topics in Biology (summer only) 3

BIO 622 Directed Study (non-scheduled) 1-3

BIO 595 Special Topics in Botany (summer only) 2

BOT 622 Directed Study in Botany (non-scheduled)..... 1-3

SCED 508 Workshop in Biology Education (summer, interim

session) 0.5-6

SCED 513 Professional Enrichment in Biological Education (summer,

interim session) 1-12

ZOO 595 Special Topics in Zoology (summer only)..... 2

ZOO 622 Directed Study in Zoology (non-scheduled) 1-3

Note — Hours can be selected from the above list of non-scheduled or

summer/ interim scheduled classes or other appropriate classes in math,

supporting sciences or education, with approval of advisor.

Free 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 courses specified here.....3

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.

Prerequisites

Students should have completed a minimum of one year of biological science and one year of chemistry before admission to the program.

Required Courses — 3 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

Elective Courses — 27 semester hours

Basic Electives — 6 semester hours minimum

BIO 525 Molecular Genetics2

BIO 550 Cell Physiology.....4

BOT 530 Plant Taxonomy4

BOT 533 Morphogenesis of Algae and Fungi.....4

BOT 540 Anatomy/Morphogenesis of Plants.....4

BOT 550 Plant Physiology.....4

ZOO 533 General Parasitology.....4

ZOO 534 Mammalogy4

ZOO 535 Survey of Fishes, Amphibians, and Reptiles.....4

Note — 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 Plants.....4

BOT 655 Advanced Plant Physiology3

ZOO 542 Vertebrate Histology.....4

ZOO 551 Mammalian Physiology I.....4

ZOO 552 Mammalian Physiology II.....4

ZOO 560 Animal Ecology4

ZOO 636 Advanced Invertebrate Zoology.....4

ZOO 645 Comparative Vertebrate Adaptations4

Enrichment and Non-scheduled Electives — 3 semester hours minimum

BIO 501 Current Issues in Biology (summer only)1

BIO 508 Workshop in Biology (summer, interim session).....0.5-6

BIO 513 Professional Enrichment (summer, interim session).....1-10

BIO 585 Topics in Field Biology (summer, interim session).....1-10

BIO 592 Internship in Biological Science1-3

BIO 595 Special Topics in Biology (summer only)3

BIO 622 Directed Study (non-scheduled)1-3

BOT 595 Special Topics in Botany (summer only)2

BOT 622 Directed Study in Botany (non-scheduled).....1-3

SCED 508 Workshop in Biology Education (summer, interim

session)0.5-6

SCED 513 Professional Enrichment in Biological Education (summer,

interim session)1-12

ZOO 595 Special Topics in Zoology (summer only)2

ZOO 622 Directed Study in Zoology (non-scheduled)1-3

Note — Hours can be selected from the above list of non-scheduled or summer/interim scheduled classes or other appropriate classes in the sciences or College of Education, with approval of advisor.

Research Elective — 1-10 semester hours

BIO 699 Thesis.....1-10

BOT 699 Thesis.....1-10

ZOO 699 Thesis1-10

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.

Bachelor of Arts in Black Studies

Program Requirements

Complete the black studies courses specified here.....	27
Complete program electives indicated here	12
Complete General Education and electives to total.....	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, irreducible, intrinsically valuable body of knowledge that expresses the black experience and that recognizes that the common heritage and struggle of people of African descent often are inadequately or inappropriately examined. The program's courses are organized into 4 foci: historical, social-psychological, political-economic, and philosophical-religious-aesthetic.

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 peoples 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 Courses — 27 semester hours

BLS 100 Introduction to Black Studies	3
BLS 105 Ancient African Civilization.....	3
BLS 201 Afro-American History I.....	3
BLS 202 Afro-American History II	3
BLS 240 Dynamics of Racism	3
BLS 385 African Colonialism and Decolonization	3
BLS 399 Community Study Project.....	1-4
BLS 460 Religion and Theology in Black America.....	3
BLS 490 Seminar in Black Studies.....	3

Elective Courses — 12 semester hours

Historical Focus

BLS 102 Black Woman in America.....	3
BLS 322 Black Nationalism and Pan Africanism	3
BLS 395 Aspects of the African-American Experience.....	3
BLS 432 Pan African World	3

Note — Choose one of the above courses.

Social-Psychological Focus

BLS 101 Crisis of Identity.....	3
BLS 340 The Black Family.....	3
BLS 395 Aspects of the African-American Experience.....	3
ID 308 Interpersonal Growth Workshop.....	3

Note — Choose one of the above courses.

Political-Economic Focus

BLS 320 The Economic Experience of Black America	3
BLS 395 Aspects of the African-American Experience.....	3
BLS 420 Black Urban Politics.....	3

Note — Choose one of the above courses.

Philosophical-Religious-Aesthetic Focus

BLS 205 African and Native American Worldviews	3
BLS 305 Survey of African-American Literature.....	3
BLS 360 Music and the Black Experience.....	3
BLS 395 Aspects of the African-American Experience.....	3
BLS 397 Philosophy of Afro-Americans	3
BLS 450 Philosophy and Theology of Martin Luther King, Jr. & Malcolm X.....	3

BLS 470 African Philosophy	3
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Note — Choose one of the above courses.

Notes

Electives are chosen with the approval of the coordinator.

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 student has already taken the course for credit.

Students must choose at least one elective at the 300-level and one elective at the 400-level.

Bachelor of Arts in Chemistry

Emphasis in Biochemistry

Program Requirements

Complete the chemistry core specified here	27
Complete the required courses specified here.....	20
Complete the supporting courses specified here.....	22
Complete the program electives specified here.....	6-8
Complete General Education and electives to total a minimum of ...	120

This program is designed to give students a broad, solid 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.

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.

General Education

This program requires you to complete the following course(s) within the 40 hours of General Education.

<i>Category 1b — Intermediate Composition</i>	
SCI 291 Scientific Writing	3
<i>Category 2 — Mathematics</i>	
MATH 131 Calculus and Analytic Geometry I.....	4
<i>Category 6 — Sciences and Mathematics</i>	
MATH 132, PHYS 240, and CHEM 111 or CHEM 114 and CHEM 117, required in this program will fulfill this requirement.	

Chemistry Core — 27 semester hours

CHEM 111 Principles of Chemistry I.....	5
or	
CHEM 114 General Chemistry I	4
and	
CHEM 117 General Chemistry I Laboratory	1
CHEM 112 Principles of Chemistry II.....	4
or	
CHEM 115 General Chemistry II	4
and	
CHEM 118 General Chemistry II Laboratory	1
CHEM 320 Theory and Use of Analytical Instruments.....	1
CHEM 321 Analytical Chemistry	5
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
CHEM 441 Inorganic Chemistry I.....	2

Required Courses — 20 semester hours

CHEM 442 Inorganic Chemistry II.....	2
CHEM 451 Physical Chemistry I	4
and	
CHEM 453 Physical Chemistry I Laboratory	1
CHEM 452 Physical Chemistry II	4
and	
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 Support Courses — 22 semester hours

<i>Mathematics — 8 semester hours</i>	
MATH 132 Calculus and Analytic Geometry II.....	4
MATH 233 Calculus and Analytic Geometry III.....	4
<i>Physics — 10 semester hours</i>	
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
<i>Biology — 4 semester hours</i>	
BIO 110 Principles of Biology	4

Elective Courses — 6-8 semester hours

<i>Biology — 6-8 semester hours</i>	
<i>Suggested</i>	
BIO 450 Cell Physiology	4
BIO 220 Genetics	3
BIO 351 Microbiology	4

Note

It is recommended that students consider electives in public speaking (SPCO 100), computer programming (SCI 390), and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective course work 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, STAT201, PHYS 342, and PHYS 343.

Bachelor of Arts in Chemistry

Emphasis: Industrial Chemist

Program Requirements

Complete the chemistry core specified here	27
Complete the required courses specified here.....	9
Complete the supporting courses specified here	13
Complete Business Minor.....	30
Complete General Education and electives to total.....	120

This program offers training in chemistry, mathematics, and physics with a minor in Business Administration. It provides a sound foundation in chemistry and specific background knowledge about the chemical industry, polymers, economics, accounting, management, marketing, information systems, and business statistics.

Students completing this degree emphasis can pursue a career in chemical or medical sales. Students completing this degree emphasis who wish to pursue graduate study in one of the areas of chemistry may be required to complete additional course work in physical chemistry and/or mathematics depending on the entrance requirements of the specific graduate school. Students also may earn a Master's in Business Administration.

General Education

This program requires you to complete the following course(s) within the 40 hours of General Education.

<i>Category 1b — Intermediate Composition</i>	
SCI 291 Scientific Writing	3
<i>Category 2 — Mathematics</i>	
MATH 131 Calculus and Analytic Geometry I.....	4
<i>Category 5 — Social Science</i>	
ECON 103 Introduction to Economics: Macroeconomics.....	3
PSY 120 Principles of Psychology	4
Chemistry Core — 27 semester hours	
CHEM 111 Principles of Chemistry I.....	5
<i>or</i>	
CHEM 114 General Chemistry I	4
<i>and</i>	
CHEM 117 General Chemistry I Laboratory	1
CHEM 112 Principles of Chemistry II.....	4
<i>or</i>	
CHEM 115 General Chemistry II	4
<i>and</i>	
CHEM 118 General Chemistry II Laboratory	1
CHEM 320 Theory and Use of Analytical Instruments.....	1
CHEM 321 Analytical Chemistry	5
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
CHEM 441 Inorganic Chemistry I.....	2

Required Courses — 9 semester hours

CHEM 450 Survey of Physical Chemistry	4
CHEM 490 Advanced Laboratory in Chemistry.....	1
CHEM 493 Special Topics in Chemistry (two courses)	4

Required Support Courses — 13 semester hours

<i>Physics — 10 semester hours</i>	
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5
<i>Economics — 3 semester hours</i>	
ECON 105 Introduction to Economics: Microeconomics.....	3

Note

It is recommended that students consider electives in public speaking (SPCO 100), computer programming (SCI 390), and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective course work 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, STAT201 and PHYS 242.

Business Administration Minor — 30 semester hours

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 I.....	3
BAFN 370 Business Finance.....	3
BAMG 350 Management.....	3
BAMK 360 Marketing.....	3
MATH 176 Topics in Calculus.....	3

Note

Students may substitute MATH 131 for MATH 176. Other appropriate substitutions in the minor may be made with the consent of the minor advisor.

Bachelor of Arts in Chemistry

Emphasis: Pre-Health

Program Requirements

Complete the chemistry core specified here	27
Complete the required courses specified here.....	12
Complete the supporting courses specified here	19
Complete the program electives specified here.....	10-11
Complete General Education and electives to total a minimum of ...	120

This program offers training in chemistry, mathematics, and physics with a broader base in biological sciences and biochemistry. It provides a solid foundation in chemistry and biological sciences for those students planning to pursue professional studies in dentistry, medicine, optometry, podiatry, pharmacy, or veterinary medicine.

Students completing this degree emphasis will meet the prerequisites to the professional schools listed above. Acceptance into these schools is competitive and students should register with and be advised by the pre-health committee in the chemistry department. Students completing this degree emphasis who wish to pursue graduate study in one of the areas of chemistry may be required to complete additional course work in physical chemistry and/or mathematics depending on the entrance requirements of the specific graduate school.

General Education

This program requires you to complete the following course(s) within the 40 hours of General Education.

<i>Category 1b — Intermediate Composition</i>	
SCI 291 Scientific Writing	3
<i>Category 2 — Mathematics</i>	
MATH 131 Calculus and Analytic Geometry I.....	4
<i>Category 6 — Sciences and Mathematics</i>	
BIO 110 and CHEM 111 or CHEM 114 and CHEM 117, required in this program will fulfill this requirement.	
Chemistry Core — 27 semester hours	
CHEM 111 Principles of Chemistry I.....	5
or	
CHEM 114 General Chemistry I	4
and	
CHEM 117 General Chemistry I Laboratory	1
CHEM 112 Principles of Chemistry II.....	4
or	
CHEM 115 General Chemistry II	4
and	
CHEM 118 General Chemistry II Laboratory	1

CHEM 320 Theory and Use of Analytical Instruments	1
CHEM 321 Analytical Chemistry	5
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
CHEM 441 Inorganic Chemistry I	2

Required Courses — 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 Support Courses — 19 semester hours

<i>Biology — 9 semester hours</i>	
BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5
<i>Physics — 10 semester hours</i>	
PHYS 220 Introductory Physics I	5
PHYS 221 Introductory Physics II	5

Elective Courses — 10-11 semester hours

<i>Biology — 7-8 semester hours</i>	
<i>Suggested:</i>	
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4
BIO 351 Microbiology	4
<i>Computer Science — 3 semester hours</i>	
or	
<i>Statistics — 3 semester hours</i>	
CS/STAT.....	3

Note

It is recommended that students consider electives in public speaking (SPCO 100), computer programming (SCI 390), and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective course work 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 201, PHYS 342, and PHYS 343.

Bachelor of Arts in Chemistry

Emphasis: Professional Chemist

Program Requirements

Complete the chemistry core specified here	27
Complete the required courses specified here.....	12
Complete the supporting courses specified here	18
Complete the program electives specified here.....	4
Complete General Education and electives to total a minimum of ...	120

This program is designed to give students a broad background and a solid 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.

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.

General Education

This program requires you to complete the following course(s) within the 40 hours of General Education.

<i>Category 1b — Intermediate Composition</i>	
SCI 291 Scientific Writing	3
<i>Category 2 — Mathematics</i>	
MATH 131 Calculus and Analytic Geometry I.....	4
<i>Category 6 — Sciences and Mathematics</i>	
MATH 132, PHYS 240, and CHEM 111 or CHEM 114 and CHEM 117, required in this program will fulfill this requirement.	

Chemistry Core — 27 semester hours

CHEM 111 Principles of Chemistry I.....	5
<i>or</i>	
CHEM 114 General Chemistry I	4
<i>and</i>	
CHEM 117 General Chemistry I Laboratory	1
CHEM 112 Principles of Chemistry II.....	4
<i>or</i>	
CHEM 115 General Chemistry II	4
<i>and</i>	
CHEM 118 General Chemistry II Laboratory	1

CHEM 320 Theory and Use of Analytical Instruments.....	1
CHEM 321 Analytical Chemistry	5
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
CHEM 441 Inorganic Chemistry I	2

Required Courses — 12 semester hours

CHEM 442 Inorganic Chemistry II	2
CHEM 451 Physical Chemistry I	4
<i>and</i>	
CHEM 453 Physical Chemistry I Laboratory	1
CHEM 452 Physical Chemistry II	4
<i>and</i>	
CHEM 454 Physical Chemistry II Laboratory	1

Required Support Courses — 18 semester hours

<i>Mathematics — 8 semester hours</i>	
MATH 132 Calculus and Analytic Geometry II.....	4
MATH 233 Calculus and Analytic Geometry III.....	4
<i>Physics — 10 semester hours</i>	
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5

Elective Courses — 4 semester hours

<i>Laboratory Courses: 1 course</i>	
CHEM 490 Advanced Laboratory in Chemistry.....	1
CHEM 483 Experimental Biochemistry I	1
CHEM 499 Seminar and Research in Chemistry.....	2
<i>Lecture Courses: 1 course</i>	
CHEM 481 General Biochemistry I.....	3
CHEM 500 Level Courses	3

Note

It is recommended that students consider electives in public speaking (SPCO 100), computer programming (SCI 390), and for those students planning to go to graduate school, a foreign language (GER 100 or GER 101 and 102). Additional elective course work 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 201, PHYS 342, and PHYS 343.

Bachelor of Arts in Chemistry

Emphasis in Teaching

Program Requirements

Complete the chemistry courses specified here	27
Complete the required courses specified here.....	8
Complete the supporting courses specified here	23
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

This program is designed to prepare students to be secondary school chemistry teachers certified in Science by the Colorado Department of Education. In addition to a strong background in chemistry, students will receive additional training in biological sciences, physics, earth sciences, and mathematics.

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 the high school background and the point in the educational career at which the program is entered.

General Education

This program requires you to complete the following courses within the 40 hours of General Education.

Category 2 — Mathematics

MATH 131 Calculus and Analytical Geometry I

Category 6 — Sciences and Mathematics

BIO 110 and CHEM 111 or CHEM 114 and CHEM 117 required in this program will fulfill this requirement.

Chemistry Core — 27 semester hours

CHEM 111 Principles of Chemistry I	5
or	
CHEM 114 General Chemistry I	4
and	
CHEM 117 General Chemistry I Laboratory	1

CHEM 112 Principles of Chemistry II	4
or	
CHEM 115 General Chemistry II	4
and	
CHEM 118 General Chemistry II Laboratory	1
CHEM 320 Theory and Use of Analytical Instruments	1
CHEM 321 Analytical Chemistry	5
CHEM 331 Organic Chemistry I	5
CHEM 332 Organic Chemistry II	5
CHEM 441 Inorganic Chemistry I	2

Required Courses — 8 semester hours

CHED 495 Seminar in Teaching Chemistry	2
CHEM 360 Environmental Chemistry	2
CHEM 450 Survey of Physical Chemistry	4

Required Support Courses for Science Certification — 23 semester hours

Biology — 9 semester hours

BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5

Earth Sciences — 4 semester hours

GEOL 201 Physical Geology	4
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Physics — 10 semester hours

PHYS 220 Introductory Physics I	5
PHYS 221 Introductory Physics II	5

Notes

It is recommended that students have a fundamental background in computers; courses such as SCI 390, SCI 391, or SCI 393 are recommended.

PTE is required for this program.

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 Gordon E. Tomasi, Chairman, Advisory Committee for preprofessional studies in the health sciences. Department of Chemistry, Ross 138, 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. A 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 and 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 Liberal Arts

Program Requirements

Complete the required courses specified here.....	12
Complete program electives specified here	18

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 the admission requirements of the Graduate School, the student should have completed a program equivalent to the Bachelor of Arts degree in Chemistry (Liberal Arts) including courses in organic, inorganic, analytical 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. Students must take written qualifying examinations.

Required Courses — 12 semester hours

CHEM 600 Seminar in Chemistry.....	2
CHEM 699 Thesis	10

Elective Courses — 12 semester hours

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 555 Chemical Kinetics	3
CHEM 558 Chemical Thermodynamics.....	3
CHEM 559 Quantum Chemistry	3
CHEM 581 General Biochemistry I.....	4
CHEM 582 General Biochemistry II.....	4
CHEM 590 Special Topics in Chemistry.....	3
CHEM 622 Directed Studies	1-3
CHEM 654 Statistical Thermodynamics.....	2

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.

Master of Arts in Chemistry

Emphasis in Teaching

Program Requirements

Complete the required courses 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 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

Students must take written qualifying examinations.

Required Courses — 8-12 semester hours

CHEM 600 Seminar in Chemistry.....	2
CHED 682 Problems in Teaching Chemistry.....	3
CHEM 622 Directed Studies	3
or	
CHEM 699 Thesis	7

Note — Students must meet a physical chemistry requirement if not previously taken. CHEM 560 or CHEM 551, 552, 453, and 454 may be taken to meet this requirement.

Elective Courses — 14 semester hours

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 555 Chemical Kinetics	3
CHEM 558 Chemical Thermodynamics.....	3
CHEM 559 Quantum Chemistry	3
CHEM 581 General Biochemistry I.....	4
CHEM 582 General Biochemistry II.....	4
CHEM 590 Special Topics in Chemistry.....	3

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.

Bachelor of Arts in Earth Sciences

Emphasis in General Earth Sciences

Program Requirements

Complete the earth sciences courses specified here.....	30
Complete program electives indicated here	30
Complete General Education and electives to total.....	120

Earth Sciences includes astronomy, geology, meteorology, and oceanography.

The General Earth Sciences Program is flexible and gives students the opportunity to develop a sequence of courses within the earth sciences that best meets individual interests and career goals. A departmental advisor will work closely with the student to ensure that the program meets individual needs. It may be taken by individuals who wish to gain a broad background in the earth sciences, who wish to pursue interests in oceanography or astronomy, who have an interest in environmental issues, or who have other related goals.

Required Courses — 30 semester hours

Must be selected from courses with AST, ESCI, GEOL, MET, or OCN prefixes that may be counted for earth sciences majors. It is recommended that students emphasize one or two of the disciplines.

Elective Courses — 30 semester hours

Select from earth science, supporting science, mathematics, and computer science course offerings

Notes

The course of study for this major must be developed in consultation with and 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.

Of the 30 hours of electives, at least 20 hours must be in supporting sciences, mathematics, and computer science. These must be selected from courses that have been approved for the major by the department.

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.

Bachelor of Arts in Earth Sciences

Emphasis in Geology

Program Requirements

Complete the earth sciences courses specified here.....	38
Complete the supporting courses specified here	32
Complete program electives indicated here	3
Complete General Education and electives to total.....	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.

General Education

Category 2 — Mathematics

MATH 124 College Algebra	3
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Required Courses — 38 semester hours

GEOL 201 Physical Geology.....	4
GEOL 202 Historical Geology.....	4
GEOL 320 Mineralogy	4
GEOL 340 Paleontology	3
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

Required Support Courses — 32 semester hours

BIO 111 Survey of Organismal Biology.....	5
CHEM 111 Principles of Chemistry I.....	5
CHEM 112 Principles of Chemistry II.....	4
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 117 may be taken in lieu of CHEM 111.

Elective Courses — 3 semester hours

Notes

Electives must be selected from courses with a GEOL prefix that are open to majors. 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 Meteorology

Program Requirements

Complete the earth sciences courses specified here.....	30
Complete the supporting courses specified here	29
Complete program electives indicated here	6
Complete General Education and electives to total.....	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 U.S. 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 Courses — 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

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 Support Courses — 29 semester hours

CG 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 201 Introduction to Statistical Analysis I	3
Note — CHEM 114 and 117 may be taken in lieu of CHEM 111.	

Elective Courses — 6 semester hours

Notes

Electives must be selected with the approval of the student's advisor.

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 Teaching

Program Requirements

Complete the earth sciences courses specified here.....	32
Complete the supporting courses specified here	22
Complete program electives indicated here	6
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

The course work 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 Certification from the Colorado Department of Education.

General Education

Category 2 — Mathematics

MATH 124 College Algebra	3
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Category 6 — Science and Mathematics

BIO 110 Principles of Biology	4
CHEM 111 Principles of Chemistry I.....	5

Required Courses — 32 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
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 Support Courses — 22 semester hours

Math and science support courses, required to meet CDE Certification in Secondary Science, are to be selected in consultation with the major advisor. The following courses are recommended:

BIO 111 Survey of Organismal Biology	5
CHEM 112 Principles of Chemistry II.....	4
MATH 124 College Algebra	3
PHYS 220 Introductory Physics I.....	5
PHYS 221 Introductory Physics II.....	5

Elective Courses — 6 semester hours

One advisor-approved computer science course	3
One advisor-approved course with a GEOL prefix.....	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.

Master of Arts in Earth Sciences

Program Requirements

Complete the required courses specified here..... 8-12
Complete program electives specified here18-22

This program is intended for students who wish to broaden or deepen their backgrounds in the earth science disciplines (astronomy, geology, meteorology, and oceanography), and enhance their research skills. It is designed for, but not limited to, students who are or intend to become secondary or community college teachers of earth science. It is appropriate for individuals wishing to explore earth sciences as a second career.

The department recognizes that its graduate students have a wide range of educational interests and goals, and this program is designed to be flexible in order to accommodate the needs of each individual. In consultation with the student's committee, each student will design a curriculum appropriate for his or her particular objectives.

Required Courses — 8-12 semester hours

ESCI 599 Seminar in Earth Sciences Minimum of..... 2
ESCI 600 Introduction to Earth Science Research..... 2
ESCI 695 Special Topics in Earth Science 2

ESCI 697 Graduate Research Minimum of..... 2
or
ESCI 699 Thesis 6

Note — ESCI 599, a one semester hour course, must be taken at least twice while the student is in residence at UNC.

Elective Courses — 18-22 semester hours

Select, in consultation with the faculty, from courses with AST, ESCI, GEOL, MET, OCN, and SCED prefixes.

Notes

Students must complete all Graduate School requirements as described elsewhere in this *Bulletin*.

A thesis is optional. Individuals who do not do a thesis must complete two hours of ESCI 697.

With approval of the Graduate Studies Committee the student may include courses from other departments in her or his program of studies.

Both written and oral comprehensive examinations are required.

Bachelor of Arts in Economics

Program Requirements

Complete the economics courses specified here	27
Complete the supporting courses specified here	22
Complete program electives indicated here	12
Complete General Education and electives to total.....	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.

General Education

Category 5 — Social Sciences

MIND 286 Value Issues in Political Economy.....	3
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Required Courses — 27 semester hours

Economics

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 452 Introduction to Econometrics	3
ECON 470 History of Economic Thought.....	3

Required Support Courses — 22 semester hours

Mathematics — 7 semester hours

MATH 124 College Algebra	3
MATH 131 Calculus and Analytic Geometry.....	4
Note — MATH 221 Elementary Linear Algebra is highly recommended.	

Statistics — 6 semester hours

BACS 291 Business Statistics I	3
BACS 390 Business Statistics II	3

Computer Proficiency — 9 semester hours

BACS 280 CIS and Support Facilities	3
BACS 283 Business Microcomputer Systems.....	3
BACS 300 Information Systems	3

Elective Courses — 12 semester hours

Economics courses numbered 200 and higher.

Note

Credit will be given for ENST 335.

Bachelor of Arts in English

Emphasis in Language Arts for Elementary and Middle School Teaching

Program Requirements

Complete the required courses specified here.....	39
Complete the elective course.....	2-3
Complete the PTE Program	
Complete General Education and electives to total minimum of	120

The language arts major offers a balanced approach to literature, language and 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 certification) and grades 5-9 (with middle school certification) and to accept teaching assignments to a wide range of courses in language arts. Further, the bachelor's program will provide an appropriate background for future professional and graduate-level work in areas such as law, theology, medicine (with 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.

Required Courses — 39 semester hours

ENG 131 Introduction to Literature	3
ENG 225 Language and the History of English.....	3
ENG 238 Introduction to Folklore.....	3
ENG 240 Introduction to Creative Writing.....	3
ENG 260 Masterpieces of English Literature	3
ENG 261 Masterpieces of American Literature.....	3
SPCO 111 Oral Interpretation	3
SPCO 231 Small Group Communication.....	3

ENG 318 Traditional and Modern Grammars	3
ENG 319 Advanced Expository Techniques	3
EDRD 414 Literature for Children, Adolescents, & Young Adults.....	3
SPCO 323 Intercultural Communication	3
ENG 414 Greek and Comparative Mythology.....	3

Elective Courses — 2-3 semester hours

THEA 281 Improvisation and Creative Dramatics.....	2
EDRD 415 Current Trends and Issues in Reading/Language Education.....	3
EDRD 418 Communication Skills in a High-Tech Society	2

Notes

English majors pursuing teacher certification 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.

To be recommended for teacher certification, 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.

Qualified students may be exempted by examination from ENG 131.

Bachelor of Arts in English

Emphasis in Liberal Arts

Program Requirements

Complete the English courses specified here.....	30
Complete program electives indicated here.....	9
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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.

Required Courses — 30 semester hours

Lower Division Core

ENG 131 Introduction to Literature	3
ENG 225 Language and the History of English.....	3
ENG 260 Masterpieces of English Literature	3
ENG 261 Masterpieces of American Literature.....	3
ENG 262 Masterpieces of World Literature	3

Upper Division Core

ENG 318 Traditional and Modern Grammars	3
ENG 319 Advanced Expository Techniques	3
Period courses (ENG 361-372); two from English, and one from American Literature	9

Elective Courses — 9 semester hours

Elective courses: ENG 106, 120, 122, 123, 125, and 127 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 Teaching

Program Requirements

Complete the English courses specified here	30
Complete program electives indicated here	9
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

The English major with a teaching emphasis at UNC is unique for its balanced approach to literature, language and writing, and pedagogy. The program affords future teachers broad coverage of literary history, special topics in literature, genre studies, and the like; courses in 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 certification), grades 5-9 (with middle school certification), and grades 7-12 (with secondary certification) and to accept teaching assignments to 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 Courses — 30 semester hours

Lower Division Courses

ENG 131 Introduction to Literature	3
ENG 225 Language and the History of English.....	3
ENG 260 Masterpieces of English Literature	3
ENG 261 Masterpieces of American Literature.....	3
ENG 262 Masterpieces of World Literature	3
Period courses (ENG 361-372); two from English, and one from American Literature	9

Upper Division Courses

ENG 318 Traditional and Modern Grammars	3
ENG 319 Advanced Expository Techniques	3

Elective Courses — 9 semester hours

Elective Courses: ENG 106, 120, 122, 123, 125, and 127 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; teaching majors are also expected to take at least one section of ENG 240, Introduction to Creative Writing.

Notes

English majors pursuing teaching certification must complete PTE requirements listed separately in this *Bulletin*.

Qualified students may be exempted by examination from ENG 131.

The English Department put the major subtitled "Emphasis in Elementary and Middle School Teaching" in the catalogue when we first learned that students would no longer be majoring in elementary education but would have to take a major in a liberal arts field. We felt that a strong English major would give elementary education students an in-depth study of language and literature, which we believed was in keeping with the purpose of the CCHE directive. The notes for the teaching majors clarify standards for both PTE and student teaching, characteristics that make these majors different from the liberal arts major. They also require teaching majors to take ENG 240, Creative Writing.

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 50 clock hours of EDFE 270 or 370, must have completed at least 30 hours with no D's in the major, 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.

To be recommended for teacher certification, 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 that were taken at UNC.

Master of Arts in English

Program Requirements

Complete the required course specified here	3
Complete program electives specified here	33

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. 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 Courses — 3 semester hours

ENG 600 Introduction to Graduate Study.....	3
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Elective Courses — 33 semester hours

A minimum of six courses must be selected from 600-level offerings 27
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 600-level seminars).

The thesis or creative projects may be written under ENG 699 for 6 semester hours credit..... 6

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 course work (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 certification in English. Students must consult your departmental advisor and/or the College of Education PTE office if they are interested in elementary or secondary certification.

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: 22 semester hours

Program Requirements

Complete the environmental studies courses specified here.....	6
Complete the program electives indicated here	16
Complete the General Education, major and electives to total.....	120

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 on 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 Courses — 6 semester hours

ENST 100 Introduction to Environmental Studies.....	3
ENST 405 Senior Seminar.....	3

Elective Courses — 16 semester hours

<i>Social Processes</i>	
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
Note — Take two of the above courses.	
<i>Physical Resource Science</i>	
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
Note — Take two of the above courses.	
<i>Sensory Perception</i>	
ENST 375 Literature and the Environment	3
ENST 385 Art and the Environment	2
Note — Take one of the above courses.	
<i>Special Problems</i>	
ENST 422 Directed Studies	1-3
ENST 492 Internship in Environmental Studies.....	4-15
Note — Take as 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 course work 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

Complete the French courses specified here	30
Complete program electives indicated here	3
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 promotion 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 Courses — 30 semester hours

FR 201 Intermediate French I	4
FR 202 Intermediate French II	4
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 475 Seminar in French Literature	2
Advanced Literature Courses	8

Elective Courses — 3 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 316 Contemporary France	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.

Students must demonstrate competency in certain areas of language activity. See department advisor for competency list.

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

Students must complete a minor approved by the department.

Bachelor of Arts in French

Emphasis in Teaching

Program Requirements

Complete the French courses specified here	33
Complete program electives indicated here	3
Complete a minor with minimum hours	18
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

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 Certification 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 Courses — 33 semester hours

FR 201 Intermediate French I	4
FR 202 Intermediate French II	4
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
FL 341 Methods of Teaching in the Secondary School	3
Advanced Literature Courses	8

Elective Courses — 3 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 316 Contemporary France	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 BA in French, teaching emphasis, must be beyond the first year level.

Students must demonstrate competency in certain areas of language activity. See department advisor for competency list.

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

Before application may be made for student teaching, a French teaching major must have successfully passed the department oral proficiency examination. (Consult advisor.)

Students 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 hrs.) to be taken along with the Methods course, FL 341.

Master of Arts in Foreign Languages

Emphasis in French Teaching

Program Requirements

Complete the required courses specified here..... 10
Complete program electives specified here20

The program prepares secondary teachers of French 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

In addition to meeting 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 Courses — 10 semester hours

FL 508 Workshop	2
FL 531 Teaching of Foreign Languages.....	2
FR 505 Topics in French Civilization.....	3
FR 506 Topics in French Literature	2
FR 521 Problems in Advanced Grammar	2
or	
FR 522 Problems in Advanced Composition	1

Elective Courses — 20 semester hours

Courses in language, literature, and civilization from within the French offerings of the Department of Foreign Languages.....	10
Courses from outside of the department in the areas of pedagogy and civilization and culture.....	10

Note — Courses selected must relate logically to the teaching of French. A minimum of two courses in each area will be chosen with the content 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 written comprehensive examinations in the areas of French language, literature, and civilization and Foreign Language teaching methodology.

Bachelor of Arts in Geography

Emphasis in Applied Geography

Program Requirements

Complete the geography courses specified here	21
Complete program electives indicated here	18
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 a major in geography are generally preparing for careers in cartography, location analysis, urban and regional planning, or transportation planning. Examples of specific employment opportunities include map design and construction, market analysis, commercial site analysis, and industrial location analysis. Additional positions include transportation planning, land-use and real estate analysis and planning, environmental and social impact assessment, and city planning. Students should select either the applied geography or the liberal arts emphasis in conjunction with their career goals.

Required Courses — 21 semester hours

GEOG 110 Geography of the United States and Canada	3
GEOG 200 Location and Human Behavior	3
GEOG 225 Physical Geography.....	3
GEOG 312 Economic Geography	3
GEOG 364 Maps and Imagery	3
GEOG 402 Cartography.....	3
GEOG 475 Quantitative Techniques in Geography	3
Note — GEOG 402, Cartography, is also offered for graduate credit under GEOG 502.	

Elective Courses — 18 semester hours

Skills — 6-7 semester hours

CG 105 Personal Computer Applications.....	3
CG 110 BASIC Programming.....	3
CG 115 FORTRAN 77 Programming.....	3
CG 120 Pascal Programming	3
SOC 360 Computer Applications in the Social Sciences	3
STAT 201 Introduction to Statistical Analysis I	3
STAT 310 Basic Statistical Methods I	4
STAT 311 Basic Statistical Methods II	4
Note — Students take two of the above courses as skills requirement	

Advanced Geography Electives — 6 semester hours (minimum)

GEOG 300 Advanced Human Geography: Topics	3
GEOG 315 Resource Management	3
GEOG 360 Political Geography	3
GEOG 392 Field Course in Geography	1-3
GEOG 422 Directed Studies.....	1-3
GEOG 490 Problems in Geography	3
GEOG 492 Internship.....	1-3
Note — Students take a minimum of 6 semester hours chosen from the above courses. GEOG 300, GEOG 422, and GEOG 490 may be taken for credit more than once.	

Advanced Associated Electives — 6 semester hours (minimum)

BAFN 372 Principles of Real Estate.....	3
BAMK 360 Marketing.....	3
BAMK 362 Marketing Strategy	3
BLS 420 Black Urban Politics.....	3
BOT 270 Economic Botany	3
ECON 245 Urban Planning Economics.....	3
ECON 341 Public Finance	3
ECON 360 Economics of Growth and Development	3
ENST 205 Environment, Politics, and Law	2
ENST 235 Chemistry and the Environment	2
ENST 255 Atmospheric Environment of Humans	2
ENST 265 Conservation of Natural Resources	2
ENST 335 Environment and Resource Economics	3
ENST 492 Internship in Environmental Studies.....	4
GERO 460 Community Resources for the Elderly	3
HISP 300 Social Stratification in the Mexican-American Community.....	3
MET 205 General Meteorology	4
MET 421 Climatology	3
PSCI 208 Introduction to Public Administration	3
PSCI 315 Comparative Public Policy	3
REC 451 Administration of Leisure Delivery Systems	3
SOC 270 World Population Problems.....	3
SOC 272 The Community.....	3
SOC 333 Social Class and Inequality	3
SOC 371 Sociology of Aging.....	3
Note — Students take a minimum of 6 semester hours chosen from the above courses. Some substitution will be permitted for courses in Advanced Associated Electives with prior approval from the student's faculty advisor.	

Bachelor of Arts in Geography

Emphasis in Liberal Arts

Program Requirements

Complete the geography courses specified here	12
Complete the supporting courses specified here	6-7
Complete program electives indicated here	27
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 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 teaching, cartography, location analysis, recreation/travel planning, military or political intelligence, or resource management. Examples of specific employment opportunities include map design and construction, market analysis, tour planning/operation, and defense analysis. Additional positions include political strategist, land-use and real estate analysis and planning, environmental and social impact assessment, and city planning. Students should select either the applied geography or liberal arts emphasis in conjunction with their career goals.

Required Courses — 12 semester hours

GEOG 110 Geography of the United States and Canada	3
GEOG 200 Location and Human Behavior	3
GEOG 225 Physical Geography	3
GEOG 364 Maps and Imagery	3

Required Support Courses — 6-7 semester hours from the following

ANT 100 General Anthropology	3
ECON 103 Introduction to Economics: Macroeconomics	3
GEOG 100 World Geography	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note — Students take two of the above courses as part of General Education.

Elective Courses — 27 semester hours

Advanced Regional Courses — 12 semester hours (minimum)

GEOG 318 Australia	2
GEOG 326 Africa	3
GEOG 335 Geography of Middle America	3
GEOG 340 Europe	3
GEOG 344 Asia: Special Topics	3
GEOG 350 Colorado	3
GEOG 365 The Soviet Union	3
GEOG 438 South America	3
GEOG 453 Geography of the Great Plains	3

Note — GEOG 438 and 453 are also offered for graduate credit under the numbers of GEOG 538 and GEOG 553. Majors must take a minimum of 12 semester hours in Advanced Regional Geography. GEOG 344 may be taken for credit more than once.

Advanced Systematic Courses — 15 semester hours (minimum)

GEOG 300 Advanced Cultural 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	3
GEOG 402 Cartography	3
GEOG 422 Directed Studies	3
GEOG 475 Quantitative Techniques in Geography	3
GEOG 490 Problems in Geography: Topics	3
GEOG 492 Internship	3

Note — GEOG 402 is also offered for graduate credit under the number GEOG 502. Majors must take a minimum of 15 semester hours in Advanced Systematic Geography. GEOG 300, GEOG 325, GEOG 422, and GEOG 490 may be taken for credit more than once.

Note

Electives will be selected with the approval of a faculty advisor.

Master of Arts in Geography

Program Requirements

Complete the required courses specified here.....	15
Complete program electives specified here	15

Graduate study in geography integrates three components: current geographic information, research techniques, and application of research. The program emphasizes developing an understanding of the geographic conditions that influence human decisions and actions.

Students in the master of arts program prepare for employment in government, business, or academic endeavors or for more advanced study at the doctoral level.

Admission

In addition to the admission requirements of the Graduate School, the student must possess an earned bachelor's degree in a field germane to geography from an accredited institution, and be approved by a majority vote of the full-time faculty of the Department of Geography.

Required Courses — 15 semester hours

GEOG 505 Evolution of Geographic Thought	3
GEOG 575 Seminar in Quantitative Geography.....	3
GEOG 578 Seminar in Research Methodology	3
GEOG 590 Advanced Research Seminar	3
GEOG 600 Introduction to Graduate Study and Research	3

Elective Courses — 15 semester hours

GEOG 502 Cartography.....	3
GEOG 510 Seminar in Teaching Geography.....	3
GEOG 538 South America.....	3
GEOG 553 Geography of the Great Plains	3
GEOG 579 Seminar in Systematic Geography: Topics.....	3
GEOG 589 Seminar in Regional Geography: Topics.....	3
GEOG 592 Field Course in Geography	1-6
GEOG 622 Directed Study	1-3
GEOG 693 Practicum	3
GEOG 699 Thesis.....	6

Notes

GEOG 579 and GEOG 589 may be taken for credit more than once.

Applicants admitted to the Master of Arts in Geography program will complete a diagnostic evaluation during their first semester. Results of this diagnostic will determine what, if any, supplemental work must be completed in addition to the minimum 30 semester hours required for the degree.

With the approval of an academic advisor, students may include up to nine semester hours of graduate credit from programs outside of geography.

Students may elect to write a thesis as part of their elective hours. Those who choose not to write a thesis must successfully complete written and oral comprehensive examinations administered by the Department of Geography.

Bachelor of Arts in German

Emphasis in Liberal Arts

Program Requirements

Complete the German courses specified here	30
Complete program electives indicated here	3
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 Courses — 30 semester hours

GER 201 Intermediate German I.....	4
GER 202 Intermediate German II.....	4
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 475 Seminar in German Literature	2
Advanced Literature Courses.....	8

Elective Courses — 3 semester hours (minimum)

GER 150 Practicum in Contemporary Culture	1
GER 316 Contemporary Germany	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.

Students must demonstrate competency in certain areas of language activity. See department advisor for competency list.

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

Students must complete a minor approved by the department

Bachelor of Arts in German

Emphasis in Teaching

Program Requirements

Complete the German courses specified here	33
Complete program electives indicated here	3
Complete a minor with minimum hours	18
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

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 Certification 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 Courses — 33 semester hours

FL 341 Methods of Teaching in the Secondary School.....	3
GER 201 Intermediate German I.....	4
GER 202 Intermediate German II.....	4
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
Advanced Literature Courses.....	8

Elective Courses — 3 semester hours (minimum)

GER 150 Practicum in Contemporary Culture	1
GER 316 Contemporary Germany	3
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 BA in German, teaching emphasis, must be beyond the first year level.

Students must demonstrate competency in certain areas of language activity. See department advisor for competency list.

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

Before application may be made for student teaching, a German teaching major must have successfully passed the department oral proficiency examination. (Consult advisor.)

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.

Master of Arts in Foreign Languages

Emphasis in German Teaching

Program Requirements

Complete the required courses specified here..... 10
 Complete program electives specified here20

The program prepares secondary teachers of German 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

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 Courses — 10 semester hours

FL 508 Workshop 2
 FL 531 Teaching of Foreign Languages..... 2
 GER 505 Topics in German Civilization 3
 GER 506 Topics in German Literature 2
 GER 521 Problems in Advanced Grammar
 or
 GER 522 Problems in German Composition..... 1

Elective Courses — 20 semester hours

Courses in language, literature, and civilization from within the German offerings of the Department of Foreign Languages..... 10
 Courses from outside of the department in the areas of pedagogy and civilization and culture 10

Note — 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 spring semester Study Abroad Program in Germany. Master's degree candidates are encouraged to participate and, when qualified, may obtain an assistantship.

Students must successfully complete written 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

Complete the Hispanic studies courses specified here.....	15
Complete the supporting courses specified here.....	18
Complete program electives indicated here.....	3
Complete a minor with minimum hours.....	18
Complete General Education and electives to total.....	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 U.S. Southwest, and Hispanics of the United States.

Students become linguistically and culturally proficient for work or travel in the Hispanic world.

Required Courses — 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 Support Courses — 18 semester hours

GEOG 335 Geography of Middle-America.....	3
GEOG 438 South America.....	3
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

Elective Courses — 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 331 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 U.S. Hispanic.....	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.

Bachelor of Arts in Hispanic Studies

Emphasis in Mexican-American Studies

Program Requirements

Complete the Hispanic studies courses specified here.....	24
Complete the supporting courses specified here.....	12
Complete program electives indicated here.....	3-4
Complete a minor with minimum hours.....	18
Complete General Education and electives to total.....	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 U.S. Southwest, and Hispanics of the United States.

Students become linguistically and culturally proficient for work or travel in the Hispanic world.

Required Courses — 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 U.S. Hispanics.....	3

Required Support Courses — 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

Elective Courses — 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

Complete the history courses specified here.....	24
Complete program electives indicated here	18
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 end result of a student's study is a senior project completed under the direction of a faculty advisor during the senior year in residence.

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 Department of History has been acknowledged as a Center of Excellence at the University.

Required Courses — 24 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 397 History Colloquium: Senior Seminar in History.....	3
HIST 399 Introduction to Historical Research.....	3
HIST 480 Senior Project	3
<i>One of the following:</i>	
HIST 110 African Civilization to 1885	3
HIST 115 Asian Civilization	3
HIST 118 History of Mexico.....	3

Elective Courses — 18 semester hours

Notes

One additional course must be drawn from offerings in African or Asian or Latin American history numbered 200 or above. Fifteen additional semester hours of electives in history with no more than nine in any one area (U.S., Europe, Third World) of history. At least nine elective hours are to be taken at the 300 level or higher; the remaining six hours are to be drawn from courses numbered 200 or higher.

History majors must complete a minor of at least 18 hours, preferably within the College of Arts and Sciences. History majors are encouraged to take a foreign language.

Bachelor of Arts in History

Emphasis in Teaching

Program Requirements

Complete the history courses specified here.....	24
Complete the supporting courses specified here	24
Complete program electives indicated here	18
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

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 project 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 certification area, is qualified to teach in the secondary schools and to pursue graduate study in history. The Department of History has been acknowledged as a Center of Excellence at the University.

Required Courses — 24 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 397 History Colloquium: Senior Seminar in History.....	3
HIST 399 Introduction to Historical Research.....	3
HIST 480 Senior Project	3

One of the following:

HIST 110 African Civilization to 1885	3
HIST 115 Asian Civilization	3
HIST 118 History of Mexico.....	3

Required Support Courses — 24 semester hours

Social Sciences

ANT 100 General Anthropology	3
ECON 103 Introduction to Economics: Macroeconomics	3
<i>or</i>	
ECON 105 Introduction to Economics: Microeconomics	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. Total history and social science hours in the teaching major: 66.

Elective Courses — 18 semester hours

Students must take at least one additional course in African or Asian or Latin American history numbered 200 or higher. Fifteen additional hours of electives in history must be taken with no more than nine in any one area (U.S., Europe, Third World) of history. At least nine hours are to be taken at the 300 level or higher; the remaining six hours are to be drawn from courses numbered 200 or higher.

Notes

No minor is required in the History Education program.

PTE is required of this program.

To be admitted to the PTE program and Student Field Experiences, students must have at least a 2.80 GPA in their major.

Before registering for EDFE 444 (Supervised Teaching), students must have completed at least 15 hours in history.

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, in conjunction with the College of Education, which 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 certification) 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 Department of History has been acknowledged as a Center of Excellence at the University.

Required Courses — 3 semester hours

HIST 600 Introduction to Graduate Historical Study 3

Elective Courses — 27 semester hours

Elective courses may be taken from the following offerings, each of which is double-numbered with an equivalent undergraduate course, e.g., HIST 520 will appear with HIST 320. (No more than nine hours of designated double-numbered courses will count toward a master's degree program.)

Double-Numbered Courses

United States

HIST 520 Advanced Study in American Colonial History 3
 HIST 533 U.S. Diplomatic History Since 1914 3
 HIST 537 Advanced Study in the History of American Education 3
 HIST 550 Industrial America 3

Europe

HIST 589 Modern Europe..... 3

Africa

HIST 518 Modern Africa 3

Asia

HIST 509 Modern Southeast Asia 3
 HIST 510 Modern China..... 3
 HIST 511 Modern Japan 3

Latin America

HIST 514 Seminar in Latin American History 3
 HIST 515 Advanced Study in Latin American History..... 3

Notes

Candidates for the M.A. in history must consult with the chair of the history department before the end of the first semester in residence so that an advisor may be assigned. The advisor, in consultation with the candidate, will choose two other department members to constitute the candidate's examining committee. Candidates are advised to consult frequently with the professors who constitute their examining committees.

No more than nine hours may be earned in double-numbered courses.

The maximum credit that can 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.

A student who does not bring to the graduate program at least 12 semester hours in history, but who has a sufficiently high enough GPA to be admitted to graduate study, will be provisionally admitted to the master's program. During the first semester in residence, he or she will be examined orally by a department committee. A recommendation to pass by this committee will enable the department chair to request the Graduate Office to remove the provisional status. All students without exception, however, must satisfy the 30 hours master's degree requirement.

Non-Thesis Option

At least fifteen hours of course work must be concentrated in one of the following areas: United States; Europe; Africa, Asia, or Latin America. The area chosen will become the student's major field.

Twelve hours must be taken in history courses falling outside the student's major area of concentration.

Students who do not elect to write a thesis must pass a written comprehensive examination in their major field, designed around completed course work. This examination will be of three hours duration and may be taken no earlier than the second semester of graduate study. Candidates passing this written examination will be examined orally by a departmental committee within two weeks after the written examination.

Candidates have one opportunity to retake a failed examination. Failure to pass the second examination will eliminate the candidate from the program. At least one full semester must elapse between the failure of the first examination and retaking the examination. These rules apply to oral as well as written examinations.

Thesis Option

Up to nine hours may be earned in HIST 699, by writing a thesis on a subject that must fall within the student's major field. At least fifteen hours of course work must be concentrated in one of the following areas: United States; Europe; Africa, Asia, or Latin America. The area chosen will become the student's major field. Six hours must be taken outside the major area of concentration. The research and writing of a thesis precludes comprehensive examinations. An oral departmental examination concentrating on the thesis will be held after the thesis has been accepted and deemed satisfactory by the student's major advisor.

Students who wish to concentrate on the pedagogical aspects of the discipline should take HIST 537, Seminar in the History of American Education (3 hours) and HIST 593, Practicum in Teaching History (3 hours).

Students are advised to enroll in at least two graduate seminars or topic courses each semester in residence.

Candidates must obtain a permit from the Graduate School allowing them to take their comprehensive examinations. The permit must be presented to the candidate's advisor before the date of the first comprehensive examination.

Assistantships: Master's degree candidates are encouraged to apply for Oliver M. Dickerson assistantships presently established at \$2,000-\$4,000 per academic year. Applications are to be made to the Chair, Graduate Committee, Department of History.

Bachelor of Arts in Interdisciplinary Studies

Administered by the College of Arts and Sciences

Program Requirements

Complete the Interdisciplinary Studies course specified here	3
Complete an approved, coherent multi- or interdisciplinary program of electives	57
Complete General Education and electives to total.....	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 course work 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 Courses — 3 semester hours

ID 422 Directed Studies	3
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Elective Courses — 57 semester hours

Notes

Students desiring to enter the program must have their interdisciplinary studies proposal approved by the Interdisciplinary Studies Committee no later than the first semester of their junior year.

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

Interdisciplinary studies proposals must include at least three courses from a minimum of two disciplines to be considered acceptable proposals.

Students in this program must maintain a grade point average of 2.6 or above.

Bachelor of Arts in Interdisciplinary Studies

Emphasis in International Trade and Relations

Program Requirements

Complete the International Trade and Relations courses specified here	47
Complete program electives indicated here	15
Complete General Education and electives to total.....	120

The emphasis area will develop a broad understanding of international relations through the study of business, foreign language, economics, geography, history, political science, communication, and anthropology.

The program will prepare individuals with a broad understanding of international relations and business to work in diverse careers related to government, international business, and travel.

Required Courses — 47 semester hours

International Trade Relations Core Courses

BAMK 360 Marketing.....	3
BAMK 464 International Marketing.....	3
or	
BAMG 458 International Management.....	3
ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
ECON 345 International Trade	3
ECON 346 International Finance	3
or	
ECON 360 Economics of Growth and Development	3
ECON 350 Intermediate Macroeconomics	3
GEOG 312 Economic Geography	3
HIST 240 Modern America: 1914 — Present	3
PSCI 220 Introduction to International Relations.....	3
or	
PSCI 320 American Foreign Policy	3
SPCO 221 Nonverbal Communication	3
SPCO 323 Intercultural Communication	3
Foreign Language (Intermediate Level or Above)	8
Seminar: International Trade and Relations (to be developed)	1

Elective Courses — 15 semester hours

In addition to the core requirements, the student is to take 15 additional hours in one of the following emphasis areas.

Emphasis Area: African and Middle Eastern

ANT 110 World Cultures	3
ANT 310 World Area Study (Africa)	3
BLS 105 Ancient African Civilization.....	3
BLS 432 Pan-African World.....	3
BLS 470 African Philosophy	3
ECON 250 Comparative Economic Systems.....	3
GEOG 326 Africa.....	3
GEOG 392 Field Course in Geography (Africa and/or Middle East)	3
HIST 110 African Civilization.....	3
HIST 318 Modern Africa	3
PSCI 325 Conflict in the Middle East	3

Note — No more than three hours of internship may be used to complete any emphasis area. Internships for more than three hours are available above the 15 hour requirement.

Emphasis Area: Asian

ANT 110 World Cultures	3
ANT 313 Modernization and Development	4
ECON 250 Comparative Economic Systems.....	3
GEOG 344 Asia — Topics.....	3
HIST 115 Asian Civilization	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 Art of the Orient.....	3
HUM 225 Studies in Asian Humanities	3
MIND 181 Great Traditions of Asia.....	3
SOC 270 World Population Problems.....	3

Note — No more than three hours of internship may be used to complete any emphasis area. Internships for more than three hours are available above the 15 hour requirement.

Emphasis Area: European

ANT 110 World Cultures	3
ECON 250 Comparative Economic Systems.....	3
GEOG 340 Europe	3
GEOG 365 The Soviet Union	3
GEOG 392 Field Course in Geography (Europe)	3
HIST 120 Western Civilization from Ancient Greece to 1689	3
HIST 121 Western Civilization from 1689 to the Present.....	3
HIST 262 American Intellectual History.....	3
HIST 369 Britain in 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 West European Politics	3
PSCI 310 East European Politics	3

Note — No more than three hours of internship may be used to complete any emphasis area. Internships for more than three hours are available above the 15 hour requirement.

Emphasis Area: Latin American

ANT 110 World Cultures	3
ECON 250 Comparative Economic Systems.....	3
GEOG 335 Middle America	3
GEOG 392 Field course in Geography (Latin America)	3
GEOG 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

Note — No more than three hours of internship may be used to complete any emphasis area. Internships for more than three hours are available above the 15 hour requirement.

Master of Science in Interdisciplinary Studies: Secondary Science Teaching

Program Requirements

Complete required semester hours in first science discipline..... 12

Complete required semester hours in second science discipline 12

Complete program elective semester hours specified below..... 9

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, Earth Sciences, and Physics), Mathematics and Applied Statistics Department, and related departments/divisions (Educational Studies; Educational Technology; Professional Studies; Psychology; and Research, Evaluation, and Development).

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: 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 601 (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.

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 students' needs, electives may be taken in either the science disciplines or in supporting areas.

Notes

All students are required to pass a written comprehensive examination covering the completed course work.

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 certification should consult their program advisors. This master of science degree does not lead to Colorado teacher certification.

Journalism and Mass Communications Major Requirements

To become a major in the Department of Journalism and Mass Communications, you should first become a pre-JMC major. This is done by filling out a "Change of Major/Minor" form, available from the department in Candelaria 123. You may do this anytime during your freshman, sophomore, or junior year. Seniors are advised that it is not usually possible to complete the process of applying for full JMC-major status and take all the required course work in a single 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. The application is a five-step process:

1. Determine your eligibility. You are eligible to apply if you have:
 - a) a cumulative grade point average of 2.3 or better.
 - b) completed at least 54 credit hours of university-level course work.
 - c) received a grade of "C" or better in ENG 122, JMC 100, and JMC 210.
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 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.
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: April 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 than 36 hours with a JMC prefix toward meeting the required 120 semester hours for graduation.

A grade of "C" or better must be earned for any course required of a JMC emphasis in order for the course to count toward graduation with that emphasis.

Bachelor of Arts in Journalism Emphasis in Advertising

Program Requirements

Complete the journalism and mass communications courses specified here	24
Complete the supporting courses specified here	12
Complete program electives indicated here	3
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

The advertising curriculum provides a broad-based study of advertising with a strong professional orientation, grounding in basic marketing, and a foundation in liberal arts. The program is designed to assist students in the development of professionally related skills such as writing, planning and presentation. Also, the program will assist students in expanding their critical thinking ability, understanding the advertising industry, and becoming familiar with social issues and problems related to advertising.

Students who successfully complete this program should have gained an understanding of advertising as an institution and social force. Graduates of this program will be critical consumers of advertising. They will have had the opportunity to develop a variety of skills necessary for successful entry into the profession of advertising. Although skill and ability levels will vary, qualified students will have skills necessary for successful entry into the advertising profession.

Required Courses — 24 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
JMC 345 Broadcast Advertising and Promotion	3
JMC 385 Media Planning and Research	3
JMC 387 Advertising Copywriting.....	3
JMC 390 Impact of Mass Communications on Society	3
JMC 484 Advertising and Society	3
JMC 497 Mass Communications Law	3

Required Support Courses — 12 semester hours

BAMK 360 Marketing.....	3
BAMK 365 Advertising.....	3
BAMK 461 Advertising Campaigns.....	3
ECON 105 Introduction to Economics: Microeconomics	3

Elective Courses — 3 semester hours

BAMK 363 Promotional Strategy.....	3
JMC 492 Journalism and Mass Communications Internship.....	3

Note — Take one of the above courses.

Bachelor of Arts in Journalism

Emphasis in News-Editorial

Program Requirements

Complete the journalism and mass communications courses specified here.....	24
Complete program electives indicated here	6
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

The news-editorial sequence 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 sequence 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 sequence is a preparation for careers in related professions, such as law and government.

Required Courses — 24 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
JMC 310 Feature Writing 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

Elective Courses — 6 semester hours

Group A — News-Editorial Electives

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 491 International Mass Communications	3
JMC 492 Journalism and Mass Communications Internship.....	3
ART 271 Basic Photography	3

Note — Take one of the above courses

Group B — Journalism and Mass Communications Electives

Take one additional course with a JMC prefix.....	3
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Bachelor of Arts in Journalism

Emphasis in Public Relations

Program Requirements

Complete the journalism and mass communications courses specified here	31
Complete the supporting courses specified here	9
Complete program electives indicated here	6
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

Students in this emphasis learn the theory, writing skills and practical competencies they need to understand, prepare and present public relations materials.

Students successful in this emphasis area learn the techniques and tools of public relations so that they may seek entry-level employment in the field or seek graduate education in the area of public relations.

Required Courses — 31 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
JMC 241 Radio Production	3
JMC 310 Feature Writing News Media	3
JMC 342 Television Production	4
JMC 350 News Editing and Layout	3

JMC 380 Public Relations	3
JMC 390 Impact of Mass Communications on Society	3
JMC 481 Public Relations Techniques.....	3
JMC 497 Mass Communications Law	3

Required Support Courses — 9 semester hours

SPCO 101 Public Communication.....	3
SPCO 331 Organizational Communication.....	3
SPCO 343 Persuasion.....	3

Elective Courses — 6 semester hours

Group A — Speech Communication Electives

SPCO 212 Professional Speaking.....	3
SPCO 231 Small Group Communication.....	3
SPCO 444 Argumentation Theory.....	3

Note — Take one of the above courses.

Group B — Journalism and Mass Communications Electives

JMC 385 Media Planning and Research	3
JMC 492 Journalism and Mass Communications Internship.....	3
ART 271 Basic Photography	3

Note — Take one of the above courses.

Bachelor of Arts in Journalism

Emphasis in Telecommunications

Program Requirements

Complete the required courses specified here.....	29
Complete program electives indicated here	3
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

Students learn production, management, and critical evaluation of radio and television (including cablevision and applications of audio and video production in education, industry, and journalism).

A graduate of our telecommunications program is prepared to enter into video production, audio production, radio-TV station management, or broadcast journalism.

Required Courses — 29 semester hours

JMC 100 Introduction to Journalism and Mass Communications	3
JMC 210 Newswriting	3
JMC 241 Radio Production	3
JMC 342 Television Production	4
JMC 345 Broadcast Advertising and Promotion.....	3
JMC 390 Impact of Mass Communications on Society	3
JMC 443 Electronic Field Production.....	4
JMC 460 Media Management	3
JMC 497 Mass Communications Law	3

Elective Courses — 3 semester hours

Take one additional course with a JMC prefix.....	3
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Bachelor of Arts in Mathematics

Emphasis in Applied Statistics

Program Requirements

Complete the mathematics and statistics courses specified here	35
Complete program electives indicated here	5
Complete General Education and electives to total.....	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 Courses — 35 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.....	4
MATH 351 Elementary Statistics Theory	3

Statistics Core Courses — 10 semester hours

STAT 311 Basic Statistical Methods II	4
STAT406 Multiple Linear Regression.....	3
STAT409 Sampling Techniques	3

Elective Courses — 5 semester hours (minimum)

MATH 335 Differential Equations I	3
STAT 395 Topics in Applied Statistics.....	1-4

Note

Other elective courses may be taken with the approval of the advisor.

Bachelor of Arts in Mathematics

Emphasis in Computer Science

Program Requirements

Complete the mathematics and computer courses specified here	61
Complete program electives indicated here	9
Complete General Education and electives to total.....	120

This program trains students in the basic understanding of computer hardware, methods of computer science, and computer engineering of software.

Graduates should be prepared to obtain a job with a computer company or continue their computer science training in graduate school.

Required Courses — 61 semester hours

Required Mathematics Courses — 25 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.....	4
MATH 351 Elementary Statistics Theory.....	3

Required Computer Science Courses — 36 semester hours

CS 150 Computer Processing and Algorithmic Design.....	3
CS 160 Structured Programming Languages I	3
CS 170 Digital Logic Design.....	3
CS 180 Structured Programming Languages II	3
CS 250 Computer Architecture	3
CS 260 Assembly Programming.....	3
CS 270 Introduction to Operating Systems.....	3
CS 280 Data Structures	3
CS 350 Systems Programming	3
CS 370 Software Engineering	3
CS 380 Programming Languages	3
MATH 375 Elementary Numerical Analysis	3

Elective Courses — 9 semester hours

To be selected from one of the four following concentrations:

Systems Programming Concentration

CS 360 Advanced Data Structures	3
CS 450 Analysis of Algorithms.....	3

CS 480 Compilers.....	3
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or

CS 470 Operating Systems	3
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General Concentration

CS 360 Advanced Data Structures	3
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and

Two from the following:

CS 455 Computer Communication and Networking.....	3
CS 460 Artificial Intelligence	3
CS 475 Graphics.....	3

Computer Information Systems Concentration

BACS 380 Data Communication Systems	3
BACS 386 Data Base Management Systems	3
BACS 388 Systems Analysis and Design	3

Physics Concentration

PHYS 240 General Physics I	5
PHYS 241 General Physics: Electricity	5
PHYS 343 Alternating Current and Electronics.....	5
PHYS 443 Digital Electronics and Interfacing	4

Bachelor of Arts in Mathematics

Emphasis in Elementary/Middle School Teacher Education

Program Requirements

Complete the mathematics and statistics courses specified here.....39

Complete the PTE program

Complete General Education and electives to total a minimum of ... 120

This program is designed for prospective elementary school teachers who are interested in mathematics and the teaching of mathematics: arithmetic concepts, skills, and applications, and related topics in the areas of elementary geometry, number theory, statistics, and beginning computer literacy.

Graduates of this program are prepared to assume leadership roles in the teaching of mathematics at the elementary school level. The emphasis is specifically designed to provide a background in mathematics and related fields, such as computer education and statistics, which are readily applicable to the elementary classroom.

Required Courses — 39 semester hours

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 233 Calculus and Analytic Geometry III.....	4
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 201 Introduction to Statistical Analysis I.....	3

Notes

Students majoring in mathematics who plan to teach in the elementary school must:

- complete the requirements as stated in this *Bulletin* for certification as an elementary school teacher;
- select their electives with the approval of their major advisor.

Bachelor of Arts in Mathematics

Emphasis in Liberal Arts

Program Requirements

Complete the mathematics and statistics courses specified here.....46

Complete General Education and electives to total..... 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.

Required Courses — 46 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.....	4
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

Bachelor of Arts in Mathematics

Emphasis in Secondary Teacher Education

Program Requirements

Complete the mathematics, computer and statistic courses specified here41

Complete the PTE program

Complete General Education and electives to total a minimum of... 120

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 Courses — 41 semester hours

CG 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.....	4
MATH 351 Elementary Statistics Theory.....	3
MATH 464 Introduction to History of Mathematics.....	2
MED 341 Methods of Teaching 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:

1. have completed MATH 131 and 132 (with a grade of C or better);
2. have completed at UNC at least two content courses, which may count toward the Math major;
3. 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:

1. satisfactorily completed at least 30 semester hours of content courses that may count toward the math major, including: MATH 221, 321, and 341;
2. satisfactorily completed MED 341 and EDLS 363;
3. 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 Mathematics and Applied Statistics 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, is processed by the department.

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.

Master of Arts in Mathematics

Emphasis in Liberal Arts

Program Requirements

Complete the required courses specified here.....	14
Complete program electives specified here	16

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 the admission requirements of the Graduate School, students must have a minimum of 1000 on combined GRE quantitative and verbal scores. They must also have an undergraduate major in mathematics.

Required Courses — 14 semester hours

MATH 523 Modern Algebra I.....	3
MATH 525 Linear Algebra I.....	3
MATH 535 Introductory Analysis I.....	3
MATH 536 Introductory Analysis II.....	3
MATH 510 Seminar in Mathematics	2

Elective Courses — 16 semester hours

MATH 513 Professional Renewal	1-8
MATH 524 Modern Algebra II.....	3
MATH 540 Introduction to Topology	3
MATH 560 Introductory Complex Variables	3
MATH 564 Topics in History of Mathematics.....	3
MATH 585 Numerical Analysis I	3
MATH 586 Numerical Analysis II	3
MATH 591 Theory of Numbers.....	3
Any approved 600-level courses	1-4

Notes

Two semester hours of MATH 510 satisfy the Graduate School requirement, Introduction to Graduate Studies.

Electives must have the approval of the advisor and the appropriate department committee.

Written, closed-book examinations will be given over analysis and algebra (abstract and linear) and over one other area (group of courses). A two-hour oral exam will be given upon successful completion of the written exams.

Master of Arts in Mathematics

Emphasis in Teaching

Program Requirements

Complete the required courses specified here.....	18
Complete program electives specified here	12

The program is designed for secondary school teachers of mathematics who wish to assume leadership roles in their schools. An undergraduate degree in mathematics is desirable. Students without the degree in mathematics or its equivalent may be required to take undergraduate courses to correct mathematical and pedagogical deficiencies.

The graduate of this program is prepared to assume leadership roles in teaching and supervision in the mathematics curriculum, grades 7-12.

Required Courses — 18 semester hours

MATH 523 Modern Algebra I.....	3
MATH 525 Linear Algebra I.....	3
MATH 535 Introductory Analysis I.....	3
MATH 543 Classical Modern Geometry	3
MED 672 Curriculum in the Secondary School Mathematics	3
MED 673 Problems in Teaching Junior High School Mathematics	3
or	
MED 674 Problems in Teaching Senior High School Mathematics	3

Elective Courses — 12 semester hours

These will be selected so that the combined undergraduate/graduate program of the student contains adequate work in geometry, probability, statistics, and computer science.

Notes

MED 672 satisfies the Graduate School requirement, Introduction to Graduate Studies.

The entire M.A. program must be approved by the departmental Master of Arts Review Committee.

The departmental comprehensive examination will consist of a written examination over the mathematics education courses taken in the program, and a two-hour oral examination over all work taken in the 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.

Master of Science in Applied Statistics and Research Methods

Emphasis in Operations Research

Program Requirements

Complete the required courses specified here.....	18
Complete program electives specified here	12

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 the admission requirements of the Graduate School, the student must have the following:

- Minimum of 1500 on combined GRE aptitude (verbal, quantitative and analytical) or 500 on GMAT (Graduate Management Aptitude Test).
- A knowledge of calculus.
- A working knowledge of a programming language or a course in statistical software.

Required Courses — 18 semester hours

EPRE 600 Introduction to Graduate Research	3
STAT 502 Statistical Methods II	4
STAT 511 Mathematical Statistics with Application I	4
STAT 512 Mathematical Statistics with Applications II	4
STAT 606 Multiple Linear Regression Models	3
Note — Students may substitute another approved course to fulfill the Graduate School requirement for introduction to graduate studies.	

Elective Courses — 12 semester hours

STAT 604 Advanced Experimental Design	3
STAT 605 Multivariate Analysis I	3
STAT 607 Nonparametric Statistics	3
STAT 609 Sampling Methods	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:

- STAT 511, 512
- STAT 502, 606
- electives taken in program

Doctor of Philosophy in Applied Statistics and Research Methods

Emphasis in Measurement

Program Requirements

Complete the required courses specified here.....	58
Complete program electives specified here	12

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 which require knowledge of research methods applied to other disciplines such as education.

Admission

In addition to the admission requirements of the Graduate School, the student must have the following:

- A minimum of 1650 on combined GRE Aptitude Test scores or 550 on the GMAT (Graduate Management Aptitude Test) before formal admission to this program.
- A working knowledge of calculus.
- A working knowledge of a programming language or a course in statistical software.
- A master's degree in a relevant area.

Required Courses — 58 semester hours

EPRE 610 Statistical Packages for Educational Research	3
EPRE 674 Measurement I: Educational Testing	3
EPRE 675 Measurement II: Advanced Techniques	3
EPRE 700 Advanced Research Methods	3
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 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
STAT 797 Doctoral Proposal Research	4
STAT 799 Doctoral Dissertation	12

Elective Courses — 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:
 - STAT 511, 512
 - EPRE 674, 675, 700
 - STAT 604, 605, 615
 - STAT 606, 607, 609, and electives.
- A two-hour oral comprehensive examination.
- A dissertation which 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.

Bachelor of Arts in Medical Technology

Program Requirements

Complete the required medical technology courses specified here.....	30
Complete the required supporting courses specified here	43
Complete program electives indicated here	5-7
Complete General Education and electives to total.....	120

This program is administered by the Department of Chemistry.

The program is designed to prepare students to become 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 General Education Courses

<i>Category 2 — Mathematics</i>	
MATH 124 College Algebra	3
<i>Category 6 — Science and Mathematics</i>	
BIO 110 Principles of Biology	4
CHEM 111 Principles of Chemistry I.....	5
<i>or</i>	
CHEM 114 General Chemistry I	4
<i>and</i>	
CHEM 117 General Chemistry I Laboratory	1

Notes — MATH 124, BIO 110 and CHEM 111 or CHEM 114/117 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.

Required Courses — 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 Support Courses — 43 semester hours

<i>Biology — 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
<i>Chemistry — 23 semester hours</i>	
CHEM 112 Principles of Chemistry II.....	4
<i>or</i>	
CHEM 115 General Chemistry II	4
<i>and</i>	
CHEM 118 General Chemistry II Laboratory	1
CHEM 208 Fundamentals of Human Biochemistry	5
CHEM 320 Theory and Use of Analytical Instruments.....	1
CHEM 321 Analytical Chemistry	5
CHEM 331 Organic Chemistry I.....	5
CHEM 332 Organic Chemistry II	5

Elective Courses — 5-7 semester hours

<i>Biology — 3-4 semester hours</i>	
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.

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.

Bachelor of Arts in Philosophy

Program Requirements

Complete the philosophy courses specified here.....	21
Complete program electives indicated here	9
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 Courses — 21 semester hours

PHIL 240 Formal Logic	3
PHIL 260 Topics in the History of Philosophy.....	3
PHIL 261 Modern and Recent Philosophy	3
PHIL 350 Ethics.....	3
PHIL 385 Epistemology	3
PHIL 390 Metaphysics	3
PHIL 495 Advanced Seminar	3

Elective Courses — 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 the History of Philosophy.....	3
PHIL 115 Philosophy and Current Affairs	1-3
PHIL 120 Art of Philosophical Writing	3
PHIL 210 Nature of Scientific Reasoning.....	3
PHIL 220 Nature of Legal Reasoning.....	3
PHIL 300 Topics in Philosophy	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

Complete the physics courses specified here	12
Complete the supporting courses specified here	19
Complete program electives indicated here	31
Complete the PTE program	
Complete General Education and electives to total a minimum of	120

The program provides a broad base of essential information in the physical sciences designed to meet the needs of small rural schools where one science teacher may be required to teach physics, chemistry, and earth science.

Recipients of this degree will be qualified to teach physical science at the junior or senior high school level in any small school system.

General Education

<i>Category 7a — Interdisciplinary</i>	
ENST 225 Energy and the Environment	3

Required Courses — 12 semester hours

PHYS 220 Introductory Physics I	5
PHYS 221 Introductory Physics II	5
PHYS 475 Seminar in Teaching Physics	2
Note — PHYS 220 may be counted for General Education credit.	

Required Support Courses — 19 semester hours

CHEM 111 Principles of Chemistry I	5
CHEM 108 Fundamentals of Human Biochemistry	5
CHED 495 Seminar in Teaching Chemistry	2
BIO 110 Principles of Biology	4
SCED 441 Methods of Teaching Secondary School Science	3

Elective Courses — 31 semester hours

Electives in biology (consent of advisor)	3
Electives in earth sciences (consent of advisor)	10
Electives in physical sciences-related courses (consent of advisor)	8
Electives in mathematics (algebra and/or trigonometry)	7
Approved course in computer science programming	3

Note

PTE is required for this program.

Bachelor of Arts in Physics

Emphasis in Applied Physics

Program Requirements

Complete the physics courses specified here	59-61
Complete the supporting courses specified here	27
Complete program electives indicated here	3
Complete General Education and electives to total	128-130

The applied physics 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 physics applications than they would in the traditional physics degree.

Graduates will be well prepared for 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.

General Education — Recommended Course

<i>Category 7a — Interdisciplinary</i>	
ENST 225 Energy and the Environment	3

Required Courses — 59-61 semester hours

PHYS 236 Computer Graphics	3
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 320 Mathematical Applications	3
PHYS 340 Mechanics I	4

PHYS 341 Electricity and Magnetism I	3
PHYS 343 Alternating Current and Electronics	5
PHYS 345 Atomic, Nuclear, and Condensed Matter I	5
PHYS 347 Optics	4
PHYS 420 Thermodynamics and Statistical Physics	3
PHYS 422 Directed Studies	2
PHYS 440 Mechanics II	2
PHYS 441 Electricity and Magnetism II	2
PHYS 443 Digital Electronics and Interfacing	4
PHYS 445 Atomic, Nuclear, and Condensed Matter II	5
PHYS 447 Applied Optics	3
PHYS 470 Senior Research	1-3
Note — PHYS 240 may be counted for General Education credit.	

Required Support Courses — 27 semester hours

CG 115 FORTRAN 77 Programming	3
CHEM 111 Principles of Chemistry I	5
CHEM 112 Principles of Chemistry II	4
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

Elective Courses — 3 semester hours

Electives in Mathematics (consent of advisor)	3
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Bachelor of Arts in Physics

Emphasis in Computer Science

Program Requirements

Complete the physics courses specified here.....	52
Complete the supporting courses specified here	23
Complete program electives indicated here	9
Complete General Education and electives to total.....	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.

General Education — Recommended Course

Category 7a — Interdisciplinary

ENST 225 Energy and the Environment	3
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Required Courses — 52 semester hours

PHYS 236 Computer Graphics.....	3
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5

PHYS 320 Mathematics Applications	3
PHYS 340 Mechanics I.....	3
PHYS 341 Electricity and Magnetism I.....	3
PHYS 343 Alternating Current and Electronics.....	5
PHYS 345 Atomic, Nuclear, and Condensed Matter I	5
PHYS 347 Optics.....	4
PHYS 440 Mechanics II.....	2
PHYS 441 Electricity and Magnetism II.....	2
PHYS 443 Digital Electronics and Interfacing.....	4
PHYS 445 Atomic, Nuclear, and Condensed Matter II	5
PHYS 470 Senior Research.....	3

Note — PHYS 240 may be counted for General Education credit.

Required Support Courses — 23 semester hours

CG 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
MATH 233 Calculus and Analytic Geometry III.....	4
MATH 375 Elementary Numerical Statistics.....	3

Note — MATH 131 may be counted for General Education credit.

Elective Courses — 9 semester hours

Electives in computer science (consent of advisor)	6
Electives in mathematics (consent of advisor)	3

Bachelor of Arts in Physics

Emphasis in Liberal Arts

Program Requirements

Complete the physics courses specified here.....	45
Complete the supporting courses specified here	20
Complete program electives indicated here	12
Complete General Education and electives to total.....	120

While focusing on the main laws and principles of physics through a basic core of physics and support courses, the liberal arts emphasis 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 will know enough of the basics of physics to pursue their individual career goals, including employment in industry and research laboratories and graduate studies in physics, engineering, health or the environment. Also, by completing required Professional Teacher Education courses, students will be prepared to teach junior and senior high school science and mathematics.

General Education — Recommended Course

Category 7a — Interdisciplinary

ENST 225 Energy and the Environment	3
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Required Courses — 45 semester hours

PHYS 236 Computer Graphics.....	3
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 320 Mathematical Applications	3
PHYS 340 Mechanics I.....	3
PHYS 341 Electricity and Magnetism I.....	3
PHYS 343 Alternating Current and Electronics.....	5
PHYS 345 Atomic, Nuclear, and Condensed Matter I	5
PHYS 347 Optics.....	4
PHYS 440 Mechanics II.....	2
PHYS 441 Electricity and Magnetism II.....	2
PHYS 445 Atomic, Nuclear, and Condensed Matter II	5

Note — PHYS 240 may be counted for General Education credit.

Required Support Courses — 20 semester hours

CHEM 111 Principles of Chemistry I.....	5
CG 115 FORTRAN 77 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

Elective Courses — 12 semester hours

Electives in Physics (consent of advisor)	6
Electives in Mathematics (consent of advisor)	6

Bachelor of Arts in Physics

Emphasis in Mathematical Physics

Program Requirements

Complete the required physics courses specified here	43
Complete the required supporting courses specified here	36
Complete program electives specified here	10
Complete General Education and electives to total.....	120

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.

Required Courses — 43 semester hours

PHYS 236 Computer Graphics	3
PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 320 Mathematical Applications	3
PHYS 340 Mechanics I.....	3
PHYS 341 Electricity & Magnetism I	3
PHYS 345 Atomic, Nuclear, and Condensed Matter I	5
PHYS 347 Optics.....	4
PHYS 420 Thermodynamics & Statistical Physics	3
PHYS 440 Mechanics II.....	2
PHYS 441 Electricity & Magnetism II	2
PHYS 445 Atomic, Nuclear, and Condensed Matter II	5

Required Support Courses — 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 Elective Courses — 10 semester hours

Electives in Physics (consent of advisors)	4
Electives in Mathematics (consent of advisors).....	6

Note

This program is administered within the College of Arts and Sciences

Bachelor of Arts in Physics

Emphasis in Teaching

Program Requirements

Complete the physics courses specified here.....	32
Complete the supporting courses specified here	27
Complete program electives indicated here	8
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

The program emphasizes the laws and principles of physics and communicating these to high school students. The degree also contains enough breadth to meet the qualifications to teach physics, chemistry and mathematics at the junior and senior high school levels.

The B.A. in Physics Teaching prepares the candidate to teach physics and mathematics at the secondary level (grades 7-12). With additional physics and mathematics courses, students will qualify for graduate study in physics and for employment in industry or governmental research laboratories.

General Education — Recommended Course

Category 7a — Interdisciplinary

ENST 225 Energy and the Environment	3
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Required Courses — 32 semester hours

PHYS 240 General Physics I	5
PHYS 241 General Physics II	5
PHYS 340 Mechanics I.....	3
PHYS 341 Electricity and Magnetism I	3
PHYS 343 Alternating Current and Electronics.....	5
PHYS 345 Atomic, Nuclear, and Condensed Matter I	5
PHYS 347 Optics.....	4
PHYS 475 Seminar in Teaching Physics	2

Note — PHYS 240 may be counted for General Education credit.

Required Support Courses — 27 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.....	4
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
(Taken concurrently with EDLS 363 Clinical Experience: Secondary)	
Note — MATH 131 may be counted for General Education credit.	

Recommended Courses

MATH 233 Calculus and Analytical Geometry III.....	4
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Elective Courses — 8 semester hours

Electives in Computer courses (consent of advisor)	3
Electives in Biological Sciences (consent of advisor)	2
Electives in Earth Sciences (consent of advisor)	3

Note

PTE is required for this program.

Pre-Engineering Program

The pre-engineering program is designed for students who will usually take two years of course work at UNC before transferring to a university which offers a degree in engineering. Alternatively, after their second year, students may elect to complete the Applied Physics Emphasis B.A. program or other science or math programs at UNC.

On successful completion of this program, the student will be eligible to transfer to engineering schools throughout Colorado or the nation. The student could also transfer to other science/mathematics programs at UNC.

Required Courses

CHEM 111 Principles of Chemistry I.....	5
CG 115 FORTRAN 77 Programming.....	3
ENG 122 Elementary Composition: Exposition	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

Notes

Elective courses should be selected with consent of advisor

This program is administered within the College of Arts and Sciences

Bachelor of Arts in Political Science

Program Requirements

Complete the political science courses specified here	11
Complete program electives indicated here	25
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

Political Science is the study of that theory and practice 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. Additionally, 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 U.S. Congress, and the Colorado governor's office. The department values serious discussion of political science 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.

General Education Courses

Category 4 — Arts and Letters

HIST 120 Western Civilization from Ancient Greece to 1689	3
HIST 121 Western Civilization from 1689 to the Present.....	3
Note — The two courses listed for Category 4 are recommended for a total of 3 hours within the 40 hours of General Education.	

Category 5 — Social Sciences

ANT 100 General Anthropology	3
ECON 103 Introduction to Economics: Macroeconomics	3
GEOG 100 World Geography	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3
Note — Two of the courses listed for Category 5 are recommended for a total of 6-7 hours within the 40 hours of General Education.	

Required Courses — 11 semester hours

PSCI 100 U.S. National Government.....	3
PSCI 105 Introduction to Political Science	3
PSCI 150 Research in Political Science	2
PSCI 405 Problems in American Politics	3
or	
PSCI 415 Problems in Comparative Politics	3
or	
PSCI 425 Problems in International Relations	3
or	
PSCI 435 Problems in Political Philosophy	3

Elective Courses — 25 semester hours

Group A — American Politics

PSCI 203 Colorado Politics.....	3
ENST 205 Environment, Politics and Law	2
PSCI 207 Women and Politics	2
PSCI 208 Introduction to Public Administration	3
PSCI 300 Public Opinion	3
PSCI 302 The Presidency and Congress	3

PSCI 306 Constitutional Law I: Civil Liberties	3
PSCI 307 Constitutional Law II: Governmental Powers	3
PSCI 392 Internship	3-10
PSCI 400 Political Parties	3
PSCI 401 Minority and Interest Group Politics	3
PSCI 405 Problems in American Politics	3
Note — You must take at least two of the courses listed above.	

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 421 Soviet Foreign Policy	3
PSCI 425 Problems in International Relations	3
Note — You must take at least two of the courses listed above.	

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
Note — You must take at least two of the courses listed above.	

Group D — Comparative Politics

PSCI 210 West European Politics.....	3
PSCI 310 East European Politics	3
PSCI 315 Comparative Public Policy	3
PSCI 412 Soviet Politics	3
PSCI 415 Problems in Comparative Politics	3
Notes — You must take at least two of the courses listed above. 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.	

Notes

You must complete an 18-hour minor or a coherent block of advisor-approved courses totaling 18 hours. These hours must be taken outside of political science.

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 certification 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.

Majors in political science must, in addition to meeting the above requirements, satisfy the following:

- 1) pass with at least a "C" one of the problems courses — PSCI 405 or PSCI 425 or PSCI 435 or PSCI 415;
- 2) pass the nationally standardized test administered by the Department in the senior year; and
- 3) complete the student evaluation of the major questionnaire.

Pre-Law Program

Contact John C. Domino, Department of Political Science, L130 Michener Hall (351-2374) for pre-law information and a list of recommended courses.

UNC offers an excellent pre-law program, as well as a number of pre-law activities for undergraduate students interested in pursuing a career in the legal profession. UNC has an active Pre-Law Society as a chartered organization.

It should be noted, however, that like most American universities, UNC does not offer a pre-law major or minor.

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

Complete the Pre-Admission Required Courses	9-11
Complete the psychology courses specified here	20
Complete the supporting courses specified here	3
Complete program electives indicated here	17-19
Complete General Education and electives to total	120

The B.A. program is designed to educate students in both the research and applied aspects of psychology through course work and field experience. A broad foundation of knowledge in psychology is emphasized, as preparation for specialized training at the graduate level.

While the program is primarily geared toward preparing our majors for further training on the graduate level, there are career opportunities for bachelor's level graduates. Typical work settings include community mental health centers, vocational rehabilitation offices, correctional programs, and residential treatment centers. Another occupation for those with at least a bachelor's level training is teaching psychology in secondary schools. Since there is no Colorado secondary certification in psychology, students wishing to teach psychology at the secondary level must be certified in another subject in addition to completing the psychology major.

Program Admission Requirements

The prospective Psychology Major is encouraged to complete the pre-admission required courses as soon as possible in his/her college career, preferably in the first year. Upon completion of these courses and achievement of a 2.5 cumulative GPA, the prospective major should bring his/her transcripts or APR to the Psychology Department and make an appointment with the designated departmental reviewer. Qualified students will then be assigned a program advisor and complete the major change to Psychology.

Pre-Admission Required Courses — 9-11 semester hours

PSY 120 Principles of Psychology	4
ENG 123 College Research Paper	3
or	
SCI 291 Scientific Writing	3
ZOO 115 Human Biology	3
or	
ZOO 245 Introduction to Human Anatomy & Physiology	4
or	
BIO 110 Principles of Biology	4
Note — These courses must be completed before consideration for admission to the psychology major. These courses may also be used to satisfy General Education requirements. A cumulative grade point average of 2.5 is required for consideration for admission to the psychology major.	

Required Courses — 20 semester hours

PSY 120 Principles of Psychology	4
PSY 240 Principles of Learning	3
PSY 400 Research Design and Analysis	5
PSY 480 Physiological Psychology	5
PSY 491 Field Experience	3

Required Support Courses — 3 semester hours

STAT 201 Introduction to Statistical Analysis I	3
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Elective Courses — 17-19 semester hours

<i>Group I</i>	
PSY 230 Human Growth and Development	4
PSY 265 Social Psychology	3
PSY 355 Abnormal Psychology	3
Note — Select one course from the above group	
<i>Group II</i>	
PSY 344 Group Processes and Roles	3
PSY 407 Introduction to Counseling Theories	3
PSY 342 Cognitive and Behavioral Change: Theory, Assessment and Application	3
Note — Select one course from the above group	
<i>Group III</i>	
HISP 370 Chicano Psychology	3
PPSY 468 Psychology of Women	2
PSY 467 Psychology of Prejudice	3
Note — Select one course from the above group	
Additional electives	8-9

Master of Arts in Psychology

Program Requirements

Complete the required courses specified here.....	22-24
Complete program electives specified here	6-8

The master's program in psychology emphasizes developing 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 of 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 the admission requirements of the Graduate School, the student must complete the Graduate Record Examination and submit the scores before admission into the program. These scores are used for statistical purposes only, not for consideration of admission.

Required Courses — 22-24 semester hours

EPRE 540 Theories and Principles of Learning	3
PSY 601 Research Seminar	1
PSY 624 Human Neuropsychology	3
PSY 643 Theories of Motivation.....	3
PSY 664 Advanced Social Psychology	3
PSY 693 Research Practicum	1
PSY 697 Master's Project in Psychology	2

Note — PSY 697 must be taken twice for a total of four semester hours.
In addition to the above the student must also take:

STAT 502 Statistical Methods II	4
or	
EPRE 602 Elements of Statistics.....	3
and	
EPRE 603 Analysis of Variance.....	3

Elective Courses — 6-8 semester hours (to complete a minimum of 30 semester hours in the program)

EPRE 530 Life Span Developmental Psychology	3
EPRE 610 Statistical Packages for Educational Research	3
EPRE 615 Seminar in Applied Behavior Analysis.....	3
EPRE 630 Childhood and Adolescence.....	3
EPRE 631 Youth, Adult Development and Aging	3
EPRE 681 Learning and Cognitive Processes	3
EPRE 684 Advanced Seminar in Growth and Development.....	3
EPRE 685 Advanced Seminar in Learning.....	3
PPSY 558 Abnormal Psychology	3
PPSY 607 Theories of Counseling	2
PPSY 657 Legal and Ethical Aspects of Psychology	3
PPSY 660 Systems Analysis and Consultation Theories	2
PSY 590 Seminar in History and Systems.....	3

Note

Please note that the electives listed are *strongly recommended* by the Department of Psychology. Substitutes are possible with consent of advisor.

Master of Arts in Psychology

Emphasis in Human Neuropsychology

Program Requirements

Complete the required courses specified here.....	42-44
Complete program electives specified here	3

In addition to the core curriculum which provides a systematic foundation in psychology, the emphasis includes course work in behavioral and electrophysiological measurements of brain function in an additional year of study.

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 the admission requirements of the Graduate School, the student must complete the Graduate Record Examination and submit the scores before admission into the program. These scores are used for statistical purposes only, not for consideration of admission.

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:

PSY 355 Abnormal Psychology
PSY 400 Research Design and Analysis
PSY 480 Physiological Psychology
STAT 201 Introduction to Statistical Analysis I
ZOO 115 Human Biology
ZOO 341 Human Anatomy
ZOO 350 Human Physiology

Required Courses — 38 semester hours

EPRE 530 Life Span Developmental Psychology	3
EPRE 540 Theories and Principles of Learning	3
PPSY 558 Abnormal Psychology	3
PPSY 670 Psychological Testing	3
PPSY 675 Intelligence Assessment	3
PSY 601 Seminar in Research.....	1
PSY 620 Assessment in Behavioral Medicine.....	3
PSY 625 Advanced Neuropsychology.....	4
PSY 626 Introduction to Neuropsychological Assessment.....	4
PSY 643 Theories of Motivation.....	3
PSY 664 Advanced Social Psychology	3
PSY 693 Research Practicum	1
PSY 697 Master's Project in Psychology.....	4

In addition to the above the student must also take:

STAT 502 Statistical Methods II	4
or	
EPRE 602 Elements of Statistics.....	3
and	
EPRE 603 Analysis of Variance.....	3

Elective Courses — 3 semester hours

EPRE 610 Statistical Packages for Educational Research	3
EPRE 615 Seminar in Applied Behavior Analysis.....	3
EPRE 630 Childhood and Adolescence.....	3
EPRE 631 Youth, Adult Development and Aging	3
EPRE 681 Learning and Cognitive Processes	3
EPRE 684 Advanced Seminar in Growth and Development.....	3
EPRE 685 Advanced Seminar in Learning.....	3
PPSY 660 Systems Analysis and Consultation Theories	2

Note

Please note that the electives listed are *strongly recommended* by the Department of Psychology. Substitutes are possible with consent of advisor.

Bachelor of Arts in Social Science

Emphasis in Liberal Arts

Program Requirements

Complete the required courses specified here.....	24-28
Complete program electives indicated here	11-15
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

A general, theoretical and applied background in the social sciences gives students a basis for thinking analytically about human behavior and the 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 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.

General Education

Category 4 — Arts and Letters

HIST 120 Western Civilization from Ancient Greece to 1689	3
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Category 5 — Social Sciences

PSCI 100 U.S. National Government.....	3
ECON 103 Introduction to Economics: Macroeconomics	3

Required Courses — 24-28 semester hours

HIST 121 Western Civilization from 1689 to the Present.....	3
SOC 100 Principles of Sociology	3
or	
ANT 100 General Anthropology	3
or	
GEOG 200 Location and Human Behavior	3
CG 110 BASIC Programming.....	3
or	
PHIL 240 Formal Logic	3
PSY 120 Principles of Psychology	4
SOSC 470 Theory and Research in Social Science	3
STAT 201 Introduction to Statistical Analysis I	3
Note — SOC 362 may be substituted for STAT 201 if the sociology theory and research methods sequence is chosen.	

Theory and Research Methods

Anthropology

ANT 230 Anthropometrics	3
ANT 480 Theory and Practice in Anthropology.....	3

Economics

ECON 350 Intermediate Macroeconomics.....	3
ECON 452 Introduction to Econometrics	3

Geography

GEOG 364 Maps and Imagery	3
GEOG 475 Quantitative Techniques in Geography	3

History

HIST 399 Introduction to Historical Research.....	3
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Political Science

PSCI 150 Research in Political Science	2
PSCI 331 Political Philosophy I.....	3
or	
PSCI 332 Political Philosophy II.....	3

Psychology

PSY 240 Principles of Learning	3
or	
PSY 265 Social Psychology	3
or	
PSY 340 Cognition	3
or	
PSY 357 Theories of Personality.....	3
PSY 400 Research, Design and Analysis	5

Sociology

SOC 351 Classical Social Theory.....	3
or	
SOC 352 Contemporary Social Theory	3
SOC 361 Social Research	3
Note — Students choose one of the above discipline sequences.	

Elective Courses — 11-15 semester hours

Choose from 300-400 level courses in anthropology, economics, geography, history, political science, psychology, sociology. May not be taken in minor discipline.

Note

Choose a minor in one of the following: anthropology, economics, geography, history, political science, psychology, sociology.

Bachelor of Arts in Social Science

Emphasis in Teaching — Elementary and Middle School Certification Program

Program Requirements

Complete the required courses specified here.....	16
Complete program electives indicated here	24
Complete the PTE program	
Complete the Certification Program in Elementary and/or Middle School Education	
Complete General Education and electives to total a minimum of ...	120

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 a broad, yet focused background for teaching at both the primary (grades K-3) and intermediate (grades 4-6) levels of the elementary school, and/or middle school (grades 5-9) levels of education.

Upon successful completion of this program, of elementary education and/or middle school education requirements, and of the requirements of the Professional Teacher Education program, students will qualify to be certified to teach at the elementary and/or middle school education level.

General Education

Category 4 — Arts and Letters

HIST 100 Survey of American History from Its Beginning to 1877	3
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Category 5 — Social Sciences

GEOG 100 World Geography	3
GEOG 110 Geography of the United States and Canada	3
PSCI 100 U.S. National Government.....	3

Note — Students should elect one of the above listed geography courses.

Required Courses — 16 semester hours

ANT 100 General Anthropology	3
ECON 103 Introduction to Economics: Macroeconomics	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3
SOSC 470 Theory and Research in Social Science	3

Elective Courses — 24 semester hours

Students select electives from either the Primary Concentration or the Intermediate Concentration.

I. Primary Concentration (Grades K-3) — 15-16 semester hours

PSY 230 Human Growth and Development	4
PSY 240 Principles of Learning	3
PSY 250 Humanistic Psychology	3
PSY 265 Social Psychology	3
PSY 330 Child and Adolescent Psychology	3
PSY 340 Cognition	3
PSY 443 Motivation.....	3
SOC 120 Marriage and the Family	3
SOC 272 The Community.....	3
SOC 278 Sociology of Education	3
SOC 324 Issues in the Family.....	3
SOC 326 Sociology of Childhood and Adolescence	3
SOC 332 Social Psychology.....	3
SOC 340 Juvenile Delinquency	3
SOC 423 Violence and the Family	3

Note — Students select five courses from those listed above. Selection must include at least two courses from psychology and two from sociology. At least four of the courses must be at the 300-400 level. Both SOC 326 and PSY 330 may not be taken for credit. Both PSY 265 and SOC 332 may not be taken for credit.

Additional Coursework — 9 semester hours

ANT 314 Sex Roles in Cultural Perspective	3
BLS 101 Crisis of Identity.....	3
BLS 340 Black Family.....	3
HISP 102 Hispanic Cultures in the United States	3
HISP 300 Social Stratification in the Mexican-American Community.....	3
HISP 370 Chicano Psychology.....	3
ID 208 Feminism: An Interdisciplinary Analysis	3
SOC 221 Sociology of Sex Roles	3
SOC 237 Sociology of Minorities.....	3
WS 120 Women and Men in Perspective	3

Note — Students select three courses from the above list. Selection must include at least two courses at the 300-400 level. BLS 101, HISP 102, SOC 237 and WS 120 may not be counted if taken for general education.

II. Intermediate Concentration (Grades 4-6) — 24 semester hours

A. State and Regional Studies

ANT 324 Archaeology of Colorado and the Southwest	3
ENST 335 Environmental and Resource Economics	3
GEOG 350 Colorado.....	3
GEOG 453 Geography of the Great Plains	3
HIST 222 History of the Early American West.....	3
HIST 224 History of Colorado.....	3
HISP 225 History of the Chicano in the Southwest	3
PSCI 203 Colorado Politics.....	3

B. United States Studies

ANT 312 American Indians	3
BLS 201 Afro-American History I.....	3
BLS 202 Afro-American History II	3
ECON 341 Public Finance	3
ECON 462 Economic History of the US	3
GEOG 110 Geography of the United States and Canada	3
HIST 101 Survey of American History from 1877 to the Present	3
HIST 290 American Immigration	3
HIST 321 The New American Nation: 1763-1800	3
ID 176 The Idea of America.....	4
PSCI 306 Constitutional Law I: Civil Liberties.....	3
PSCI 307 Constitutional Law II: Government Powers.....	3

C. World Studies

ANT 120 World Archaeology	3
ANT 313 Modernization and Development	3
ECON 250 Comparative Economic Systems.....	3
ECON 345 International Trade	3
ECON 360 Economics of Growth and Development	3
GEOG 100 World Geography	3
GEOG 360 Political Geography	3
GEOG 364 Maps and Imagery	3
GEOG 438 South America.....	3
HIST 120 Western Civilization from Ancient Greece to 1689	3
HIST 121 Western Civilization from 1689 to the Present.....	3
HIST 385 History of the Holocaust, 1933 to the Present.....	3
PSCI 220 Introduction to International Relations.....	3
PSCI 315 Comparative Public Policy	3
SOC 270 World Population Problems.....	3

Note — Students must complete a minimum of 24 hours selected from two of the categories listed above. At least 15 hours must be at the 300-400 level. GEOG 100 or GEOG 110 may not be counted if taken for general education.

III. Middle School Concentration (Grades 5-9) - 24 semester hours

A. United States Studies

ANT 312 American Indians	3
BLS 340 Black Family.....	3
ECON 105 Introduction to Economics: Microeconomics	3
ECON 462 Economic History of the United States	3
GEOG 110 Geography of the United States and Canada	3
HISP 102 Hispanic Cultures in the United States	3
HISP 225 History of the Chicano in the Southwest	3
HIST 101 Survey of American History from 1877 to the Present	3
HIST 224 History of Colorado.....	3
HIST 320 Colonial and Pre-Revolutionary America, 1492-1763	3
HIST 321 The New American Nation, 1763-1800	3
HIST 331 Civil War and Reconstruction	3
PSCI 306 Constitutional Law I: Civil Liberties.....	3
PSCI 307 Constitutional Law II: Governmental Powers	3
PSCI 335 American Political Philosophy.....	3

Note - Students select three courses from those listed above. GEOG 110 may not be counted if taken for General Education.

B. World Studies

ANT 110 World Cultures	3
ANT 313 Modernization and Development	4
ECON 345 International Trade	3
GEOG 100 World Geography	3
GEOG 326 Africa.....	3
GEOG 344 Asia: Special Topics	3
HIST 361 History of Classical Greece and Rome.....	3
HIST 367 History of the Renaissance and Reformation.....	3

PSCI 220 Introduction to International Relations.....	3
SOC 270 World Population Problems.....	3
Note — Students select three courses from those listed above. GEOG 100 may not be counted if taken for General Education.	
C. Behavioral Studies	
ANT 314 Sex Roles in Cultural Perspective.....	3
BLS 101 Crisis of Identity.....	3
PSY 240 Principles of Learning.....	3
PSY 330 Child and Adolescent Psychology.....	3
PSY 340 Cognition.....	3
PSY 443 Motivation.....	3
SOC 237 Sociology of Minorities.....	3
SOC 324 Issues in the Family.....	3
SOC 332 Social Psychology.....	3
SOC 333 Social Class and Inequality.....	3
WS 120 Women and Men in Perspective.....	3
Note — Students select two courses from those listed above. At least 15 hours of the 24 hours in the Middle School Concentration must be at the 300-400 level. The following courses may not be counted if taken for General Education: BLS 101, HISP 102, SOC 237, WS 120.	

Notes

All requirements for the Professional Teacher Education Program, as described in this *Bulletin*, must be met. Students seeking certification at

the elementary level (grades K-6) and/or middle school level (grades 5-9) must also meet all requirements as described in the Elementary Education Program and Middle School Certification Program sections of this *Bulletin*.

No Social Science major may apply for admission to the Professional Teacher Education (PTE) program until he or she has passed at least 12 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 which were taken at UNC, and must have taken courses in at least four different major disciplines.

Before taking EDLS 360-362 and SOSOC 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 24 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 certification, 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 which were taken at UNC.

Bachelor of Arts in Social Science

Emphasis in Teaching — Secondary Certification Program

Program Requirements

Complete the required courses specified here.....	27
Complete program electives indicated here.....	18
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

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 certified to teach social studies at the secondary level.

General Education

Category 4 — Arts and Letters

HIST 100 Survey of American History from Its Beginnings to 1877.....	3
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Category 5 — Social Sciences

ANT 100 General Anthropology.....	3
PSY 120 Principles of Psychology.....	4

Category 7 — Interdisciplinarity, Multicultural, and International Studies

HISP 102 Hispanic Cultures in the United States.....	3
or	
WS 120 Women and Men in Perspective.....	3
or	
BLS 101 Crises of Identity.....	3

Required Courses — 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
HIST 110 African Civilization to 1885.....	3
or	
HIST 115 Asian Civilization.....	3
HIST 120 Western Civilization from Ancient Greece to 1689.....	3
or	
HIST 121 Western Civilization from 1689 to the Present.....	3

PSCI 100 U.S. National Government.....	3
SOC 100 Principles of Sociology.....	3
SOSOC 341 Teaching Secondary Social Studies.....	3
SOSOC 470 Theory and Research in Social Science.....	3

Elective Courses — 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.

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 which were taken at UNC, and must have taken courses in at least four different major disciplines.

Before taking EDLS 363 and SOSOC 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 certification, 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 which were taken at UNC.

Bachelor of Arts in Sociology

Emphasis in Criminal Justice

Program Requirements

Complete the sociology courses specified here	30
Complete program electives indicated here	9
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	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 this emphasis.

Required Courses — 30 semester hours

SOC 100 Principles of Sociology	3
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
SOC 352 Contemporary Social Theory	3
SOC 361 Social Research	3
SOC 362 Social Statistics	3
SOC 444 Sociology of Criminal Law	3

Elective Courses — 9 semester hours

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

Note — Choose two of the courses above and one advisor-approved elective.

Bachelor of Arts in Sociology

Emphasis in Education

Program Requirements

Complete the sociology courses specified here	27
Complete program electives indicated here	12
Complete the PTE requirements specified in this catalog	
Complete General Education and electives to total.....	120

The Bachelor of Arts Degree in Sociology with an emphasis in Education includes an examination of major educational issues, self theories, minorities, community and the family.

Graduates with this emphasis will be prepared to teach courses in social studies and appropriate social sciences at the elementary level. A foundation is provided for graduate work in this emphasis.

Required Courses — 27 semester hours

SOC 100 Principles of Sociology	3
SOC 278 Sociology of Education	3
SOC 237 Sociology of Minorities	3
SOC 272 Community	3
SOC 332 Social Psychology	3
SOC 351 Classical Social Theory	3
SOC 352 Contemporary Social Theory	3
SOC 361 Social Research	3
SOC 362 Social Statistics	3

Elective Courses — 12 semester hours

SOC 120 Marriage and the Family	3
SOC 170 Social Problems	3
SOC 221 Sociology of Sex Roles	3
SOC 270 World Populations Problems	3
SOC 326 Sociology of Childhood Adolescence	3
SOC 333 Social Class and Inequality	3
SOC 340 Juvenile Delinquency	3
SOC 360 Computer Applications in the Social Sciences	3

Note — Choose any four of the courses above with approval of an advisor.

Notes

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

All requirements for the Professional Teacher Education Program, as described in this *Bulletin*, must be met.

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.

To be admitted to PTE, a student must have a 2.50 grade point average in those courses counting toward his or her major.

Before being permitted to apply for student teaching, a sociology major must have at least a 2.50 grade point average at the completion of his or her program in those courses counting toward the major.

Bachelor of Arts in Sociology

Emphasis in Family Studies

Program Requirements

Complete the sociology courses specified here	30
Complete program electives indicated here	9
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

The Bachelor of Arts in Sociology with an emphasis in Family Studies includes an examination of major contemporary family issues, social policy, social change, and an internship experience with a social agency.

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 this emphasis.

Required Courses — 30 semester hours

SOC 100 Principles of Sociology	3
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 490 Family Studies Internship.....	3

Elective Courses — 9 semester hours

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

Note — Choose two of the courses above and one advisor-approved elective.

Bachelor of Arts in Sociology

Emphasis in Social Issues

Program Requirements

Complete the sociology courses specified here	15
Complete program electives indicated here	24
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

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.

Required Courses — 15 semester hours

SOC 100 Principles of Sociology	3
SOC 351 Classical Social Theory.....	3
SOC 352 Contemporary Social Theory	3
SOC 361 Social Research	3
SOC 362 Social Statistics	3

Elective Courses — 24 semester hours

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

Note — Choose two of the courses above.

Additional electives from sociology courses

Note

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

Master of Arts in Sociology

Emphasis in Criminal Justice

Program Requirements

Complete the required courses specified here.....	24
Complete program electives specified here	9

A Master of Arts in Sociology with an emphasis in Criminal Justice prepares students for careers in criminal justice or for further graduate work in either sociology or criminal justice. Individuals currently employed in a criminal justice position will find the emphasis area provides an opportunity to gain additional knowledge and skills helpful in carrying out their career duties. The course work is not intended to provide the student with specific treatment skills associated with therapeutic personnel. Rather, it will develop in students a knowledge and appreciation of those skills thereby enabling them to perform in such supervising positions as probation/parole officer, court administrator, classification officer, police officer, etc. Similarly, the emphasis on research will prepare students for program analysis and evaluation, an increasingly important task in all criminal justice agencies.

Admission

Before admission, the successful completion of SOC 340 Juvenile Delinquency or SOC 346 Criminology, or equivalent is required.

Required Courses — 24 semester hours

SOC 632 Seminar in Social Psychology.....	3
SOC 650 Sociological Theory	3
SOC 660 Advanced Social Research	3
SOC 523 Violence and the Family	3
SOC 544 Sociology of Criminal Law	3
SOC 554 Criminological Theories	3
SOC 602 Seminar in Perspectives in Sociology.....	3
SOC 681 Research Internship.....	3

Elective Courses — 9 semester hours

9 hours of electives including a maximum of 6 hours of thesis credit if the thesis option is chosen.

Notes

A maximum of nine hours credit for double-numbered courses will be accepted.

Students must successfully complete either a master's thesis or comprehensive examinations. The thesis must be successfully defended before a faculty committee.

Master of Arts in Sociology

Emphasis in Family Studies

Program Requirements

Complete the required courses specified here.....	24
Complete program electives specified here	9

The family studies emphasis prepares students for careers in family studies or for further graduate work in either sociology or family studies. Individuals currently employed in social agencies in the family service sector will find the emphasis area provides an opportunity to gain additional knowledge and skills helpful to their career duties. The course work is not intended to provide the student with specific treatment skills associated with therapeutic personnel. Rather, it will develop an understanding of the perspectives used, and provide research and policy analysis designed to facilitate administrative duties.

Admission

Before admission, the successful completion of SOC 351 Classical Social Theory, SOC 362 Social Statistics and SOC 120 Marriage and the Family or SOC 324 Issues in the Family or SOC 326 Sociology of Childhood and Adolescence, or an equivalent is required.

Required Courses — 24 semester hours

GERO 543 Grant Development and Administration	3
SOC 520 Seminar in the Family.....	3
SOC 523 Violence and the Family	3
SOC 571 Sociology of Aging.....	3
SOC 632 Seminar in Social Psychology.....	3
SOC 650 Sociological Theory	3
SOC 660 Advanced Social Research	3
SOC 681 Research Internship.....	3

Elective Courses — 9 semester hours

9 hours of electives, including 6 hours of thesis credit if the thesis option is chosen.....

Notes

A maximum of nine hours credit for double-numbered courses will be accepted.

Successful completion of the master's comprehensive examination or the master's thesis is required. The thesis must be successfully defended before a faculty committee.

Master of Arts in Sociology

Emphasis in Social Issues

Program Requirements

Complete the required courses specified here.....	15
Complete program electives specified here	18

The Master of Arts in Sociology, with an emphasis in Social Issues is a flexible program that permits students to develop a degree program for a variety of careers in education, social agencies, and to conduct research in social issues of current importance. It is a flexible program designed to provide analytical skills and knowledge supportive of professional careers and further graduate study. In-depth study of social issues can be achieved by selecting course work in consultation with an advisor.

Required Courses — 15 semester hours

SOC 550 Philosophical Issues in Sociology	3
SOC 602 Seminar in Perspectives in Sociology	3
SOC 632 Seminar in Social Psychology	3
SOC 650 Sociological Theory	3
SOC 660 Advanced Social Research	3

Elective Courses — 18 semester hours

Including six hours of thesis credit if the thesis option is chosen, an internship program is available for 3 to 6 hours, and courses not exceeding 9 hours may be taken outside of the sociology curriculum if they are supportive of one's research interest and if they receive the approval of the graduate advisor.

Notes

A maximum of nine hours credit for double-numbered courses will be accepted.

Successful completion of the master's comprehensive examination or the master's thesis is required. The thesis must be successfully defended before a faculty committee.

Bachelor of Arts in Spanish

Emphasis in Bilingual Bicultural Education

Program Requirements

Complete the Hispanic studies courses specified here.....	33
Complete the supporting courses specified here.....	3
Complete program electives indicated here.....	3
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	120

Students develop a functional proficiency in the Spanish language and an understanding of the role of the bilingual teacher in the classroom.

The program prepares competent bilingual/bicultural teachers.

Required Courses — 33 semester hours

HISP 101 Introduction to Mexican American Studies.....	3
HISP 395 Historical, Philosophical, Legal & Cultural Dimensions of Bilingual Ed.....	3
HISP 400 ESL Methods and Assessment for Bilingual Education.....	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 304 Introduction to Hispanic Literature.....	3
SPAN 411 Spanish for Bilingual Education I.....	3
SPAN 412 Spanish for Bilingual Education II.....	3
Note — Competency in the Spanish language must be demonstrated after completion of SPAN 411 and SPAN 412 before certification is granted.	

Required Support Courses — 3 semester hours

ANT 210 Studying Cultures.....	3
or	
SPCO 323 Intercultural Communication.....	3

Elective Courses — 3 semester hours

SPAN 321 Spanish Civilization and Culture.....	3
SPAN 331 Latin American Civilization and Culture.....	3
SPAN 406 Introduction to Translation.....	3
SPAN 407 Spanish for Oral Proficiency.....	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 372, 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.

Bachelor of Arts in Spanish

Emphasis in Liberal Arts

Program Requirements

Complete the Spanish courses specified here.....	36
Complete program electives indicated here.....	3
Complete a minor with minimum hours.....	18
Complete General Education and electives to total.....	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 Courses — 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

Elective Courses — 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 U.S. Hispanics.....	3
SPAN 458 Cervantes.....	3
SPAN 459 Hispanic Drama.....	3

Notes

It is recommended that Spanish majors take HIST 372 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.

Bachelor of Arts in Spanish

Emphasis in Teaching

Program Requirements

Complete the Spanish courses specified here	36
Complete the supporting courses specified here	3
Complete a minor with minimum hours	18
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	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. 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 Courses — 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 Support Courses — 3 semester hours

FL 341 Methods of Teaching in the Secondary School.....	3
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Notes

PTE is required for this program.

Students wishing to be certified must complete EDLS 363, and FL 341.

It is recommended that Spanish majors take HIST 372 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 courses specified here.....10
 Complete program electives specified here20

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 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 course work within the Department of Hispanic Studies in Spanish and 10 semester hours of course work 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 Courses — 10 semester hours

FL 508 Workshop	2
FL 531 Teaching of Foreign Languages	2
<i>Civilization</i>	
SPAN 521 Spanish Civilization and Culture	3
or	
SPAN 531 Latin American Civilization	3
or	
SPAN 560 Spanish Civilization and Culture	2
or	
SPAN 561 Latin American Civilization	2
or	
SPAN 562 Mexico and U.S. Hispanic Civilization and Culture	2
<i>Literature</i>	
SPAN 550 Masterpieces of Spanish Literature.....	3
or	
SPAN 551 Masterpieces of Latin American Literature	3
or	
SPAN 570 Readings in U.S. Hispanic Literature	1-3
or	
SPAN 571 Readings in Spanish Literature.....	1-3
or	
SPAN 572 Readings in Latin American Literature	1-3

Language

SPAN 501 Spanish Grammar	3
or	
SPAN 502 Spanish Composition.....	3
or	
SPAN 505 Spanish Phonetics and Dialects	3
or	
SPAN 507 Spanish for Oral Proficiency.....	3
or	
SPAN 580 Grammar Topics	1-3
or	
SPAN 582 Spanish for Oral Proficiency.....	2
or	
SPAN 584 Spanish Pronunciation and Dialects.....	2

Elective Courses 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 Culture	2
SPAN 561 Latin American Civilization and Culture	2
SPAN 562 Mexico and U.S. Hispanic Civilization and Culture	2
SPAN 563 Hispanic Cultural Topics.....	3

Literature

SPAN 570 Readings in U.S. Hispanic Literature	3
SPAN 571 Readings in Spanish Literature	3
SPAN 572 Readings in Latin American Literature	3
SPAN 573 National Literatures	2
SPAN 574 Masterpieces of 20th Century Spain	2
SPAN 575 Masterpieces of 20th Century Latin America	2
SPAN 576 Mexican Literature.....	2

Skill Development

SPAN 580 Grammar Topics	3
SPAN 581 Advanced Spanish Grammar	2
SPAN 582 Spanish for Oral Proficiency.....	2
SPAN 583 Oral and Written Discourse	2
SPAN 584 Spanish Pronunciation and Dialects.....	2

Workshops

HISP 508 Workshop.....	6
HISP 513 Professional Renewal	6
SPAN 508 Workshop	6
SPAN 513 Professional Renewal.....	6

Elective Courses 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

Program Requirements

Complete the required courses 18

Courses for a Bilingual Bicultural Education Endorsement will be provided by the Department of Hispanic Studies to Elementary Education students who wish to be certified 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 certification is granted.

Note — Students must pass the Hispanic Studies Department's oral proficiency test in Spanish before being allowed to enter student teaching.

Required Courses — 18 semester hours

HISP 101 Introduction to Mexican American Studies.....	3
<i>or</i>	
HISP 102 Hispanic Cultures in the United States	3
HISP 395 Historical, Philosophical, Legal and Cultural Dimensions of Bilingual Education	3
HISP 400 ESL Methods and Assessment for Bilingual Education	3
SPAN 411 Spanish for Bilingual Education I.....	3
SPAN 412 Spanish for Bilingual Education II.....	3
ANT 210 Studying Cultures.....	3
<i>or</i>	
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, you must first become a pre-major. This is done by filling out a "Change of Major/Minor" form, available from the department in Candelaria 123. You may do this anytime during your freshman, sophomore, or junior year.

Students may apply for full admission to the major after completion of 30 to 45 credits. Admission decisions will be based on the following criteria:

General Education Requirements. The department expects its new majors to have already made significant progress toward completion of the General Education requirements. Applicants must identify General Education courses in progress and present a plan for completing the remaining courses during the remainder of their undergraduate career.

Specialized Course Work. The following courses must be completed with a grade of "C" or better before admission to any Speech Communication Major:

- ENG 122 Elementary Composition: Exposition
- SPCO 102 Introduction to Speech Communication
- SPCO 201 Inquiry in Speech Communication

The remaining core courses for the major (SPCO 100 and 491) must be completed as soon as possible, or within one year of admission to the program.

Grade Point Average. Students must have a minimum of 2.5 GPA for all courses completed by the application deadline. 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.

Admission decisions will be made by a departmental admissions committee. This committee will consider applications once per semester. Deadlines for application for admission are:

- Fall 1989 — May 15, 1989
- Spring 1990 — October 16, 1989
- Summer, 1990 — April 14, 1990

Bachelor of Arts in Communication Emphasis in Elementary and Middle School Education

Program Requirements

- Complete the speech communication courses specified here 18
- Complete the supporting courses specified here 9
- Complete program electives indicated here 9
- Complete the PTE program
- Complete General Education and electives for a minimum of 120

This program focuses on the study of spoken symbolic interaction. Students in this program will emphasize course work relevant to careers in elementary education, for example in interpersonal communication, small group communication, oral interpretation of children's literature, and the development of communication skills in children.

The principal purpose of this major is to prepare persons as teachers of speech communication in elementary schools. Students completing this program also may elect to apply for graduate study in the field of speech communication or to apply to law or other professional schools.

Required Courses — 18 semester hours

- SPCO 102 Introduction to Speech Communication 3
- SPCO 111 Oral Interpretation 3
- SPCO 201 Inquiry in Speech Communication 3
- SPCO 231 Small Group Communication 3
- SPCO 321 Interpersonal Theory 3
- SPCO 491 Advanced Speech Communication Theory 3

Elective Courses — 9 semester hours

- SPCO 323 Intercultural Communication 3
- SPCO 324 Family Communication 3
- SPCO 343 Persuasion 3
- SPCO 421 Psychology of Speech Communication 3
- SPCO 424 Communication in Conflict 3
- SPCO 431 Communication and Leadership 3
- SPCO 432 Decision Making 3
- SPCO 444 Argumentation Theory 3

Support Courses from Related Fields — 9 semester hours

Elective Communication courses and Required Support courses 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 six semester hours in 400-level SPCO prefix courses. Students seeking middle school certification must complete three additional SPCO hours to fulfill the requirement for a 39 hour major.

All requirements for the Professional Teacher Education Program, as described in this *Bulletin*, must be met. Students seeking certification at the elementary level (grades K-5) or middle school (grades 6-9) must also meet all requirements as described in the Elementary Education or Middle School Education section of this *Bulletin*.

No Speech Communication major may apply for admission to the Professional Teacher Education (PTE) program until he or she has passed at least 6 semester hours of courses in the major taken at the University of Northern Colorado.

To be admitted to PTE, a student must have a 3.00 grade point average in those courses counting toward his or her major which were taken at UNC.

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 for teacher certification, 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 which 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

Complete the required courses specified here.....	12
Complete program electives indicated here	24
Complete a minor with minimum hours	18
Complete General Education and electives to total.....	120

This program focuses on the study of spoken symbolic interaction. This study includes many and varied settings in which human communication is important, for example, personal relationships, small groups, and organizations. The program especially emphasizes the process by which communication provides the "glue" that holds society and culture together.

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 Courses — 12 semester hours

SPCO 100 Basics of Public Speaking	3
SPCO 102 Introduction to Speech Communication.....	3
SPCO 201 Inquiry in Speech Communication.....	3
SPCO 491 Advanced Speech Communication Theory	3

Note — The requirement for SPCO 100 will be waived for students with extensive previous experience in public speaking.

Elective Courses — 24 semester hours

Interpersonal Communication

SPCO 321 Interpersonal Theory	3
SPCO 323 Intercultural Communication	3
SPCO 324 Family Communication	3
SPCO 421 Psychology of Speech Communication.....	3
SPCO 424 Communication in Conflict	3

Note — Select a minimum of one course from this category.

Small Group and Organizational Communication

SPCO 331 Organizational Communication.....	3
SPCO 431 Communication and Leadership	3
SPCO 432 Decision Making.....	3

Note — Select a minimum of one course from this category.

Communication and Influence

SPCO 341 Courtroom Communication	3
SPCO 343 Persuasion.....	3
SPCO 442 Rhetorical Theory	3
SPCO 444 Argumentation Theory.....	3

Note — Select a minimum of one course from this category. Select additional elective courses to total a minimum of 24 hours of electives.

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 six semester hours in 400-level courses.

Bachelor of Arts in Communication

Emphasis in Secondary Education

Program Requirements

Complete the required courses specified here.....	21
Complete the supporting courses specified here	6
Complete program electives indicated here	9
Complete a minor with minimum hours	18
Complete the PTE program	
Complete General Education and electives for a minimum of.....	120

This program focuses on the study of spoken symbolic interaction. Students in this program will emphasize course work relevant to careers in secondary education.

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 Courses — 21 semester hours

Required Core

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 351 Directing Forensics.....	3
SPCO 352 Methods of Teaching Secondary Communication	3
SPCO 491 Advanced Speech Communication Theory	3

Required Support Courses — 6 semester hours

JMC 100 Introduction Journalism and Mass Communication.....	3
THEA 240 Beginning Directing.....	3

Elective Courses — 9 semester hours

Interpersonal Communication

SPCO 321 Interpersonal Theory	3
SPCO 323 Intercultural Communication	3
SPCO 324 Family Communication	3
SPCO 421 Psychology of Speech Communication.....	3
SPCO 424 Communication in Conflict	3

Note — Select a minimum of one course from this category.

Small Group and Organizational Communication

SPCO 331 Organizational Communication.....	3
SPCO 431 Communication and Leadership	3
SPCO 432 Decision Making.....	3

Note — Select a minimum of one course from this category.

Communication and Influence

SPCO 341 Courtroom Communication	3
SPCO 343 Persuasion.....	3
SPCO 442 Rhetorical Theory	3
SPCO 444 Argumentation Theory.....	3

Note — Select a minimum of one course from this category.

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 six semester hours in 400-level courses.

All requirements for the Professional Teacher Education Program, as described in this *Bulletin*, must be met.

No Speech Communication major may apply for admission to the Professional Teacher Education (PTE) program until he or she has passed at least 6 semester hours of courses in the major taken at the University of Northern Colorado.

To be admitted to PTE, a student must have a 3.00 grade point average in those courses counting toward his or her major which were taken at UNC.

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 for teacher certification, 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 which were taken at UNC and be endorsed by the faculty of the Speech Communication department.

Master of Arts in Communication

Emphasis in Communication Education: Thesis Option

Program Requirements

Complete the required courses specified here.....	21
Complete program electives specified here	9

This program focuses on the study of spoken symbolic interaction. Students will emphasize course work relevant to elementary, secondary, or post-secondary education. Additionally, students will complete a significant research component. The thesis option is especially recommended for students considering additional graduate study.

Students completing this program will probably elect to apply for teaching positions in elementary or secondary schools or in junior and community colleges. Others will apply for Ph.D. programs in the field of speech communication.

Admission

In addition to the admission requirements of the Graduate School, the student must submit the following additional documents to the department of Speech Communication: 1) Applicants must submit a statement of purpose outlining their academic and career goals and their experience. 2) Applicants must submit two letters of recommendation. Applicants should request two persons to write these letters providing relevant information including the applicant's potential for academic success or professional growth, initiative, and working relations with colleagues and supervisors.

Prerequisites

A minimum of 15 semester hours of undergraduate classes in communication or related discipline courses approved by the graduate coordinator may be required before admission to the graduate program. This requirement may be satisfied by taking an additional 15 semester hours of graduate or undergraduate courses in the student's graduate program.

Required Courses — 21 semester hours

<i>Communication Core</i>	
COMM 600 Graduate Study in Communication.....	2
COMM 601 Qualitative Methods in Communication Research.....	2
COMM 602 Quantitative Methods in Communication Research	2
COMM 603 Communication Theory.....	3
<i>Communication Education Requirements</i>	
SPCO 604 Rhetorical Theory	3
<i>or</i>	
SPCO 605 Rhetorical Criticism	3
SPCO 510 Communication Development	3
<i>or</i>	
SPCO 511 Instructional Communication.....	3
<i>Thesis</i>	
SPCO 699 Thesis	6

Elective Courses — 9 semester hours

500 and/or 600 level course work

Notes

Select any electives with SPCO prefixes

All students in this program must pass an oral examination over their thesis.

All graduate students must pass written comprehensive examinations before graduation. Students may apply for comprehensive examinations after completion of 24 semester hours, all undergraduate requirements, and all core courses. The department reserves the right to require an additional oral examination of those students whose performance on the written comprehensive examinations is marginal.

Master of Arts in Communication

Emphasis in Communication Education: Non-Thesis Option

Program Requirements

Complete the required courses specified here.....	15
Complete program electives specified here	18

This program focuses on the study of spoken symbolic interaction. Students will emphasize course work relevant to elementary, secondary, or post-secondary education.

Students completing this program will probably elect to apply for teaching positions in elementary or secondary schools or in junior and community colleges. Others will apply for Ph.D. programs in the field of speech communication.

Admission

In addition to the admission requirements of the Graduate School, the student must submit the following additional documents to the department of Speech Communication: 1) Applicants must submit a statement of purpose outlining their academic and career goals and their experience. 2) Applicants must submit two letters of recommendation. Applicants should request two persons to write these letters providing relevant information including the applicant's potential for academic success or professional growth, initiative, and working relations with colleagues and supervisors.

Prerequisites

A minimum of 15 semester hours of undergraduate classes in communication or related discipline courses approved by the graduate coordinator may be required before admission to the graduate program. This requirement may be satisfied by taking an additional 15 semester hours of graduate or undergraduate courses in the student's graduate program.

Required Courses — 15 semester hours

<i>Communication Core</i>	
COMM 600 Graduate Study in Communication.....	2
COMM 601 Qualitative Methods in Communication Research.....	2
COMM 602 Quantitative Methods in Communication Research	2
COMM 603 Communication Theory.....	3
<i>Communication Education Requirements</i>	
SPCO 604 Rhetorical Theory.....	3
<i>or</i>	
SPCO 605 Rhetorical Criticism	3
SPCO 510 Communication Development	3
<i>or</i>	
SPCO 511 Instructional Communication.....	3

Elective Courses — 18 semester hours

500 and/or 600 level course work

Notes

Select any electives with SPCO prefixes.

All graduate students must pass written comprehensive examinations before graduation. Students may apply for comprehensive examinations after completion of 24 semester hours, all undergraduate requirements, and all core courses. The department reserves the right to require an additional oral examination of those students whose performance on the written comprehensive examinations is marginal.

Students selecting the non-thesis option should be aware of the fact that it requires three more hours than the thesis option.

Master of Arts in Communication

Emphasis in Human Communication Theory: Thesis Option

Program Requirements

Complete the required courses specified here.....	21
Complete program electives specified here	9

This program focuses on the study of spoken symbolic interaction. Students will emphasize course work relevant to rhetorical and communication theory, interpersonal and group communication, and communication research methods with the added opportunity to complete an extended research project.

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.

Admission

In addition to the admission requirements of the Graduate School, the student must submit the following additional documents to the Department of Speech Communication: 1) Applicants must submit a statement of purpose outlining their academic and career goals and their experience. 2) Applicants must submit two letters of recommendation. Applicants should request two persons to write these letters providing relevant information including the applicant's potential for academic success or professional growth, initiative, and working relations with colleagues and supervisors.

Prerequisites

A minimum of 15 semester hours of undergraduate classes in communication or related discipline courses approved by the graduate coordinator are required before admission to the graduate program. This requirement may be satisfied by taking an additional 15 semester hours of graduate courses in the student's graduate program.

Required Courses — 21 semester hours

<i>Communication Core</i>	
COMM 600 Graduate Study in Communication	2
COMM 601 Qualitative Methods in Communication Research.....	2
COMM 602 Quantitative Methods in Communication Research	2
COMM 603 Communication Theory.....	3
<i>Human Communication Requirements</i>	
SPCO 604 Rhetorical Theory	3
or	
SPCO 605 Rhetorical Criticism	3
SPCO 514 Interpersonal Communication	3
or	
SPCO 515 Group Communication.....	3
<i>Thesis</i>	
SPCO 699 Thesis	6

Elective Courses — 9 semester hours

500 and/or 600 level course work

Notes

Select any electives with SPCO prefixes

All students in this program must pass an oral examination over their thesis.

All graduate students must pass written comprehensive examinations before graduation. Students may apply for comprehensive examinations after completion of 24 semester hours, all undergraduate requirements, and all core courses. The department reserves the right to require an additional oral examination of those students whose performance on the written comprehensive examinations is marginal.

The thesis option is especially recommended for students considering additional graduate study.

Master of Arts in Communication

Emphasis in Human Communication Theory: Non-Thesis Option

Program Requirements

Complete the required courses specified here.....	15
Complete program electives specified here	18

This program focuses on the study of spoken symbolic interaction. Students will emphasize course work 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.

Admission

In addition to the admission requirements of the Graduate School, the student must submit the following additional documents to the department of Speech Communication: 1) Applicants must submit a statement of purpose outlining their academic and career goals and their experience. 2) Applicants must submit two letters of recommendation. Applicants should request two persons to write these letters providing relevant information including the applicant's potential for academic success or professional growth, initiative, and working relations with colleagues and supervisors.

Prerequisites

A minimum of 15 semester hours of undergraduate classes in communication or related discipline courses approved by the graduate coordinator are required before admission to the graduate program. This requirement may be satisfied by taking an additional 15 semester hours of graduate or undergraduate courses in the student's graduate program.

Required Courses — 15 semester hours

<i>Communication Core</i>	
COMM 600 Graduate Study in Communication	2
COMM 601 Qualitative Methods in Communication Research.....	2
COMM 602 Quantitative Methods in Communication Research	2
COMM 603 Communication Theory.....	3
<i>Human Communication Requirements</i>	
SPCO 604 Rhetorical Theory	3
or	
SPCO 605 Rhetorical Criticism	3
SPCO 514 Interpersonal Communication	3
or	
SPCO 515 Group Communication.....	3

Elective Courses — 18 semester hours

500 and/or 600 level course work

Notes

Select any electives with SPCO prefixes.

All graduate students must pass written comprehensive examinations before graduation. Students may apply for comprehensive examinations after completion of 24 semester hours, all undergraduate requirements, and all core courses. The department reserves the right to require an additional oral examination of those students whose performance on the written comprehensive examinations is marginal.

Students selecting the non-thesis option should be aware of the fact that it requires three more hours than the thesis option.

Master of Arts in Communication

Emphasis in Journalism and Mass Communications

Program Requirements

Complete the required communications core.....	9
Complete the emphasis in journalism and mass communications	9
Complete the electives specified here.....	12
Complete a thesis.....	6

Candidates for the M.A. in Communication with Emphasis in Journalism and Mass Communications study mass communications institutions and effects from theoretical and practical perspectives. Fundamental research and critical strategies are explored, and opportunities to develop specific areas of research and professional interests are provided. All students will be able to conduct independent, thoughtful, relevant inquiry into journalism and mass communications by completing a master's thesis.

Qualified, interested graduates will have the foundation for successfully pursuing doctoral studies in journalism and mass communications. Graduates of the program with professionally directed interests and necessary skills can enter (or re-enter) mass communications fields with greater potential for assuming positions of leadership and responsibility.

Admission Requirements

Applicants should possess a baccalaureate degree from an accredited college or university and meet all the requirements of the Graduate School. In addition, the department requires that the applicant's undergraduate degree be in journalism, mass communications, or some related field (i.e., communication, media technology, graphic arts, or any of the social sciences). Students who do not possess a baccalaureate in an approved field may be required to take some undergraduate courses in the department unless they possess extensive professional experience in mass communications. In either case, the determination of which courses will be required will be made and communicated to the student at the time of admission.

When applying for admission, the applicant should submit to the department a statement of purpose outlining the student's academic or

career goals and experience. The applicant should also request two persons to submit letters of recommendation to the department providing relevant information including the applicant's potential for academic success or professional growth, initiative, and working relations with colleagues and supervisors.

Prerequisites

A minimum of 15 semester hours of undergraduate classes in communication or speech communication may be required before admission to the graduate program. This requirement may be satisfied by taking an additional 15 semester hours of graduate or undergraduate courses in the student's graduate program.

Required Courses — 24 semester hours

<i>Communications Core — 9 semester hours</i>	
COMM 600 Graduate Study in Communication.....	2
COMM 601 Qualitative Methods in Communication Research.....	2
COMM 602 Quantitative Methods in Communication Research	2
COMM 603 Communication Theory.....	3
<i>Journalism and Mass Communications Emphasis — 9 semester hours</i>	
JMC 592 News Media and Public Policy.....	3
<i>or</i>	
JMC 593 Professional Perspectives	3
JMC 596 Seminar and Mass Communication Theory	3
JMC 597 Media Freedom and Censorship	3
<i>Thesis</i>	
JMC 699 Thesis.....	6

Elective Courses — 12 semester hours

Choose 12 hours of electives, at least 6 of which must have a JMC prefix.

Minor in Teaching English as a Second Language (TESL): 22 semester hours

Program Requirements

Complete the Hispanic studies/TESL courses specified here	10
Complete the supporting courses specified here	12
Complete General Education, major, and electives to total	120

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 certified to teach in Colorado, and in special English language centers in the U.S. and abroad.

Required Courses — 10 semester hours

HISP 395 Historical, Philosophical, Legal, and Cultural Aspects of Bilingual Education	3
HISP 400 ESL Methods and Assessment for Bilingual Education	3
TESL 301 TESL Practicum I	2
TESL 302 TESL Practicum II	2

Required Support Courses — 12 semester hours

ANT 210 Studying Cultures.....	3
ENG 225 Language and the History of English.....	3
ENG 318 Traditional and Modern Grammars	3
SPCO 323 Intercultural Communications	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.

Minor in Women's Studies: 18 semester hours

Program Requirements

Complete the women's studies courses specified here.....	6
Complete program electives indicated here	12
Complete General Education, major and electives to total	120

Major goals of the Women's Studies Program are to explicate, 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 a faculty coordinator and a committee of faculty and students 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 background materials for students planning careers in women's centers, business, teaching, school administration, law, medicine, and a wide variety of other professions.

Required Courses — 6 semester hours

WS 148 Introductory Seminar in Women's Studies: Women in Crisis	3
WS 448 Women's Studies Senior Seminar	3

Elective Courses — 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 308/508 The Woman Artist.....	3
BACS 418 Seminar: Women in Business.....	2
BLS 102 The Black Woman in America.....	3
ECON 304 Women and the Economy.....	3
ENG 239 Topics in Women's Literature	3
ENG 335/535 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
ID 325 Human Sexuality	3
NURS 200 Women's Health Care	3

PE 231 Women in Sport	2
PSCI 207 Women and Politics	2
PPSY 468/568 Psychology of Women.....	2
PPSY 569 Violence Against Women and Children.....	2
SOC 221 Sociology of Sex Roles.....	3
SOC 423/523 Violence in the Family.....	3
WS 120 Women and Men in Perspective.....	3
WS 308/508 Women's Studies Workshop.....	1-3
WS 310/510 Philosophy of Feminism	3
WS 320/520 Women in U.S. History.....	3
WS 373 Women-Identified Theory	3
WS 422/622 Directed Studies.....	1-3
WS 492 Internship.....	2-10
WS 548 Women's Studies Graduate Seminar.....	3
WS 692 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 must include at least one 300-level and one 400-level course.

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.

A major is available through the Interdisciplinary Studies Program (see catalog description). Programs will be developed in consultation with the Interdisciplinary Studies Program Committee and the coordinator of Women's Studies.

Graduate students may design individual programs with a women's studies emphasis through the Graduate School's Interdisciplinary Degree Program (see catalog description) and the coordinator of Women's Studies. Also see graduate courses in women's studies under the Women's Studies heading in the list of course descriptions in this catalog.

Additional College of Arts and Sciences minors may be found under the following heads: Anthropology, Environmental Studies, Teaching English as a Second Language, and Women's Studies

Minor in Applied Statistics: 18-21 semester hours

Required Courses — 18-21 semester hours

STAT 201 Introduction to Statistical Analysis I	3
or	
STAT 301 Statistics for the Health Sciences	3
STAT 310 Basic Statistical Methods I	4
STAT 311 Basic Statistical Methods II	4
STAT 395 Topics in Applied Statistics	1-4
STAT 406 Multiple Linear Regression	3
STAT 409 Sampling Techniques	3

Minor in Biological Sciences/Liberal Arts: 18 semester hours

Required Courses — 9 semester hours

BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5

Elective Courses — 9 semester hours

Select from BIO, BOT or ZOO prefix	9
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Minor in Biological Sciences/Teaching Secondary Biological Science: 25 semester hours

Required Courses — 20 semester hours

BIO 110 Principles of Biology	4
BIO 111 Survey of Organismal Biology	5
BIO 220 Genetics	3
BIO 350 General Plant Physiology	4
BIO 245 Introduction to Human Anatomy and Physiology	4

General Education — 5 semester hours

CHEM 111 Principles of Chemistry I	5
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Note
State certification regulations require a minimum of 24 semester hours distributed in appropriate science subject areas to teach any secondary science if someone is certified in another subject area. Hours required in this minor will apply toward this requirement. See advisor for other course to meet requirement.

Minor in Black Studies: 18 semester hours

Required Courses — 9 semester hours

BLS 100 Introduction to Black Studies	3
BLS 105 Ancient African Civilization	3
BLS 240 Dynamics of Racism	3

Elective Courses — 9 semester hours

BLS 305 Survey of African-American Literature	3
BLS 320 Economic Experience of Black America	3
BLS 322 Black Nationalism and Pan Africanism	3
BLS 340 The Black Family	3
BLS 360 Music and the Black Experience	3
BLS 385 African Colonialism and Decolonization	3
BLS 395 Aspects of the African-American Experience	3
BLS 397 Philosophy of Afro-Americans	3
BLS 399 Community Study Project	1-4
BLS 420 Black Urban Politics	3
BLS 422 Directed Studies	1-4
BLS 432 Pan African World	3
BLS 450 Philosophy and Theology of Martin Luther King, Jr. & Malcolm X	3
BLS 460 Religion and Theology in Black America	3
BLS 470 African Philosophy	3
BLS 490 Seminar in Black Studies	3
BLS 508 Workshop in Black Studies	1-3
BLS 513 Professional Renewal	1-4
ID 308 Interpersonal Growth Workshop	3

Notes
BLS 395 Aspects of the African-American Experience is a variable subtitle course which students may take more than once under different subtitles.

Electives are chosen with the approval of the coordinator.

Minor in Chemistry/Teaching: 20 semester hours

Required Courses — 11 semester hours

CHEM 111 Principles of Chemistry I	5
or	
CHEM 114 General Chemistry I	4
and	
CHEM 117 General Chemistry I Laboratory	1
CHEM 112 Principles of Chemistry II	4
or	
CHEM 115 General Chemistry II	4
and	
CHEM 118 General Chemistry II Laboratory	1
CHED 495 Seminar in Teaching Chemistry	2

Note — 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.

Elective Courses — 9 semester hours

CHEM 131 Introductory Organic Chemistry	4
CHEM 208 Fundamentals of Human Biochemistry	5
CHEM 320 Theory and Use of Analytical Instruments	1
CHEM 321 Analytical Chemistry	5
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

Minor in Chemistry/Liberal Arts: 20 semester hours

Required Courses — 9 semester hours

CHEM 111 Principles of Chemistry I	5
or	
CHEM 114 General Chemistry I	4
and	
CHEM 117 General Chemistry I Laboratory	1
CHEM 112 Principles of Chemistry II	4
or	
CHEM 115 General Chemistry II	4
and	
CHEM 118 General Chemistry II Laboratory	1

Elective Courses — 11 semester hours

CHEM 131 Introductory Organic Chemistry	4
CHEM 208 Fundamentals of Human Biochemistry	5
CHEM 320 Theory and Use of Analytical Instruments	1
CHEM 321 Analytical Chemistry	5
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

Minor in Computer Science: 27 semester hours

Required Courses — 21 semester hours

CS 150 Computer Processing and Algorithmic Design	3
CS 160 Structured Programming Languages I	3
CS 180 Structured Programming Languages II	3
CS 270 Introduction to Operating Systems	3
CS 280 Data Structures	3

Elective Courses — 6 semester hours

Two upper-division CS courses	6
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Minor in Earth Sciences — 20 semester hours

Elective Courses — 20 semester hours

Note

Courses with AST, ESCI, GEOL, MET and OCN prefixes may be used for the minor and must be selected in consultation with the minor advisor. No more than 8 semester hours of courses numbered between 100 and 199 may be counted for the minor.

Minor in Economics: 18 semester hours

Required Courses — 12 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

Elective Courses — 6 semester hours

ENST 335 Environmental and Resource Economics	3
ECON 341 Public Finance	3
ECON 345 International Trade	3
ECON 350 Intermediate Macroeconomics	3
ECON 400 Managerial Economics	3
ECON 452 Introduction to Econometrics	3

Minor in English: 18 semester hours

Required Courses — 6 semester hours

ENG 131 Introduction to Literature	3
ENG 225 Language and the History of English	3

Elective Courses — 12 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:

200-level	3
300-level	3
400-level	3

Notes

Students planning to be certified to teach English should elect a writing course at the 200-level or higher and must take EED 341 and EED 402 in addition to the 18 hours for the minor.

Qualified students may be exempted by examination from ENG 131.

Minor in French/Teaching: 25 semester hours

Required Courses — 22 semester hours

FR 201 Intermediate French I	4
FR 202 Intermediate French II	4
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

Elective Courses — 3 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 316 Contemporary France	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 must demonstrate competency in certain areas of language activity. See department advisor for competency list.

Advising with a French faculty member suggested before registration each semester.

Minor in French/Liberal Arts: 23 semester hours

Required Courses — 20 semester hours

FR 201 Intermediate French I	4
FR 202 Intermediate French II	4
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

Elective Courses — 3 semester hours (minimum)

FR 150 Practicum in Contemporary Culture	1
FR 316 Contemporary France	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 must demonstrate competency in certain areas of language activity. See department advisor for competency list.

Advising with a French faculty member suggested before registration each semester.

Minor in Geography — 18 semester hours

General Education Courses — 6-7 semester hours

Category 5 — Social Sciences

ANT 100 General Anthropology	3
ECON 103 Introduction to Economics: Macroeconomics	3
GEOG 100 World Geography	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3
Note — Students take two of the above courses as part of General Education.	

Required Courses — 9 semester hours

GEOG 200 Location and Human Behavior	3
GEOG 225 Physical Geography	3
GEOG 364 Maps and Imagery	3

Elective Courses — 9 semester hours

Electives will be selected with the approval of a faculty advisor.

Minor in German/Teaching: 25 semester hours

Required Courses — 22 semester hours

GER 201 Intermediate German I	4
GER 202 Intermediate German II	4
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

Elective Courses — 3 semester hours (minimum)

GER 150 Practicum in Contemporary Culture	1
GER 316 Contemporary Germany	3
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 minor in German, teaching emphasis, must be beyond the first year level.

Students must demonstrate competency in certain areas of language activity. See department advisor for competency list.

Advising with a German faculty member suggested before registration each semester.

Minor in German/Liberal Arts: 23 semester hours

Required Courses — 20 semester hours

GER 201 Intermediate German I.....	4
GER 202 Intermediate German II.....	4
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

Elective Courses — 3 semester hours (minimum)

GER 150 Practicum in Contemporary Culture.....	1
GER 316 Contemporary Germany	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 must demonstrate competency in certain areas of language activity. See department advisor for competency list.

Advising with a German faculty member suggested before registration each semester.

Minor in History: 18 semester hours

Elective Courses — 18 semester hours

Note — A minimum of 9 semester hours must be taken at the 200 level or higher.

Notes

Students intending to obtain certification for teaching Social Studies should take two of the following courses to fulfill General Education requirements: ANT 100, ECON 103, GEOG 100, PSCI 100, SOC 100, PSY 120. These courses do not count toward the history minor requirement.

It is recommended that at least one course should be drawn from courses in Latin America, Africa, or Asia.

Students are encouraged to select electives with the advice and approval of their advisors.

Minor in Humanities: 21 semester hours

Required Courses — 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

Elective Courses — 12 semester hours

Note

Electives 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 Journalism and Mass Communications: 18-19 semester hours

Required Courses — 15 semester hours

JMC 100 Introduction to Journalism and Mass Communications.....	3
JMC 210 Newswriting	3
JMC 390 Impact of Mass Communications on Society	3
JMC 397 Journalism History	3
JMC 497 Mass Communications Law	3

Elective Courses — 3-4 semester hours

JMC 241 Radio Production	3
JMC 310 Feature Writing News Media	3
JMC 342 Television Production	4
JMC 350 News Editing and Layout	3
JMC 380 Public Relations	3

Note — Take *one* of the above courses.

Minor in Mathematics/Computer Science: 24 semester hours

Required Courses — 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 375 Elementary Numerical Analysis	3
MATH 350 Elementary Probability Theory.....	4
MATH 351 Elementary Statistics Theory.....	3

Minor in Mathematics/Secondary Mathematics Teaching, Grades 7-10: 27 semester hours

Required Courses — 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 341 Methods of Teaching Mathematics.....	3

Note

Students must meet all requirements for Professional Teacher Education as specified in this *Bulletin*.

Minor in Mathematics/Liberal Arts: 20 semester hours

Required Courses — 8 semester hours

MATH 131 Calculus and Analytic Geometry I.....	4
MATH 132 Calculus and Analytic Geometry II.....	4

Elective Courses — 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 — At least six of the twelve hours of electives must be at the 300 level or above.	

Minor in Mathematics Education for Elementary Education Teachers: 18 semester hours

Required Courses — 3 semester hours

MATH 283 Informal Geometry.....	3
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Elective Courses — 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.....	15
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Notes

Students minoring in mathematics who plan to teach in the elementary school must:

- complete the requirements for certification as an elementary school teacher,
- choose electives with the approval of the minor program advisor, and
- successfully complete MATH 182 Mathematics for Elementary School Teacher II, before entering this program.

Minor in Mexican-American Studies: 18 semester hours

Required Courses — 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

Elective Courses — 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 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: 18 semester hours

Required Courses — 9 semester hours

PHIL 260 Topics in the History of Philosophy.....	3
PHIL 261 Modern and Recent Philosophy.....	3
PHIL 350 Ethics.....	3

Elective Courses — 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 120 Art of Philosophical Writing.....	3
PHIL 210 Scientific Reasoning.....	3
PHIL 220 Nature of Legal Reasoning.....	3
PHIL 240 Formal Logic.....	3
PHIL 300 Topics in Philosophy.....	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.....	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.

Electives should be chosen in consultation with minor advisor.

Minor in Physics: 32-33 semester hours

Required Courses — 16 semester hours

PHYS 240 General Physics I.....	5
PHYS 241 General Physics II.....	5
PHYS 340 Mechanics I.....	3
PHYS 341 Electricity and Magnetism I.....	3

Required Support Courses — 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

Elective Courses — 4-5 semester hours

Select one course from the following:

PHYS 343 Alternating Currents and Electronics.....	5
PHYS 345 Atomic, Nuclear and Condensed Matter I.....	5
PHYS 347 Optics.....	4

Minor in Political Science: 18 semester hours

Required Courses — 6 semester hours

PSCI 100 U.S. National Government.....	3
PSCI 105 Introduction to Political Science.....	3

Elective Courses — 12 semester hours

Group A — American Politics

PSCI 203 Colorado Politics.....	3
PSCI 207 Women and Politics.....	2
PSCI 208 Introduction to Public Administration.....	3
PSCI 300 Public Opinion.....	3
PSCI 302 The Presidency and Congress.....	3
PSCI 306 Constitutional Law I: Civil Liberties.....	3
PSCI 307 Constitutional Law II: Governmental Powers.....	3
PSCI 392 Internship.....	3-10
PSCI 400 Political Parties.....	3
PSCI 401 Minority and Interest Group Politics.....	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 421 Soviet Foreign Policy.....	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 West European Politics.....	3
PSCI 310 East European Politics.....	3
PSCI 315 Comparative Public Policy.....	3
PSCI 412 Soviet Politics.....	3
PSCI 415 Problems in Comparative Politics.....	3

Notes

The student must complete a block of elective courses selected from the above in consultation with their advisor which total 12 hours.

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: 16-18 semester hours

Required Courses — 7 semester hours

PSY 120 Principles of Psychology	4
PSY 240 Principles of Learning	3
<i>One course from the following</i>	
PSY 230 Human Growth and Development	4
PSY 265 Social Psychology	3
PSY 357 Theories of Personality	3

Elective Courses — 6-7 semester hours

Select courses from the PSY prefix.

Minor in Sociology: 18 semester hours

Required Courses — 3 semester hours

SOC 100 Principles of Sociology	3
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Elective Courses — 6 semester hours

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 two of the above

Select from any remaining sociology courses

Note — Nine hours of the minor must be 300 or above level courses.

Minor in Spanish: 24 semester hours

Required Courses — 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

SPAN 321 Spanish Civilization and Culture	3
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or

SPAN 331 Latin American Civilization and Culture	3
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Elective Courses — 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 U.S. Hispanics	3
SPAN 458 Cervantes	3
SPAN 459 Hispanic Drama	3

Notes

It is recommended that Spanish minors take HIST 372, 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: 18 semester hours

Required Courses — 6 semester hours

SPCO 100 Basics of Public Speaking	3
SPCO 102 Introduction to Speech Communication	3

Elective Courses — 12 semester hours

Interpersonal Communication

SPCO 321 Interpersonal Theory	3
SPCO 323 Intercultural Communication	3
SPCO 324 Family Communication	3
SPCO 421 Psychology of Speech Communication	3
SPCO 424 Communication in Conflict	3

Note — Select one course from this category.

Small Group and Organizational Communication

SPCO 231 Small Group Communication	3
SPCO 232 Principles of Interviewing	3
SPCO 331 Organizational Communication	3
SPCO 431 Communication and Leadership	3
SPCO 432 Decision Making	3

Note — Select one course from this category.

Communication and Influence

SPCO 241 Forensics	1-3
SPCO 341 Courtroom Communication	3
SPCO 343 Persuasion	3
SPCO 442 Rhetorical Theory	3
SPCO 444 Argumentation Theory	3

Note — Select one course from this category.

Speech Communication Electives

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 Nonverbal Communication	3
SPCO 491 Advanced Speech Communication Theory	3

Note

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.

Minor in Writing: 18 semester hours

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 Courses — 6 semester hours

ENG 203 The Essay	3
ENG 319 Advanced Expository Techniques	3

Elective Courses — 12 semester hours

Business Administration Computer Systems

BACS 205 Business Writing with Computers	3
BACS 305 Managerial Communications	3

Educational Technology

ET 504 Instructional Materials Design	3
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Note — Undergraduates must have advisor and instructor consent.

English

ENG 125 Communications on a Theme	3
ENG 127 Basic 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: Writing About Literature	3

Note — 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 410 Advanced News	3

Philosophy
PHIL 120 The Art of Philosophical Writing3
Science
SCI 291 Scientific Writing3

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, 351-2971.

Notes

The elective course work must be designed with and approved by a writing minor advisor. Only one independent study course will be permitted in this program.

College of Business Administration

Business Major Requirements.....	131
Accounting	133
Computer Information Systems.....	134
Finance	135
General Business.....	136
Management	137
Marketing.....	138
Minors	139

Location: Kepner 2053
Telephone: 351-2764
William L. Duff, Jr., Dean
Robert M. Lynch, Associate Dean
Robert C. Harris, Assistant Dean

The College of Business Administration offers a Bachelor of Science Degree in Business Administration with specialized study in the following emphasis areas: accounting, computer information systems, finance, management, and marketing. Alternatively, business students may take a nonspecialized bachelor's degree emphasis in general business. Students may also choose to minor in business administration and in computer information systems.

The mission of the college is to provide baccalaureate level education in business administration subjects. This education is designed to prepare graduates to contribute to the economic development of Colorado and to participate productively in political, social, and cultural activities.

The college also strives to create an institutional environment that fosters faculty scholarship and encourages service to the Colorado community. Business faculty are rewarded for engaging in professional service and research activities in order to maintain currency in their academic discipline and to enhance the instruction of their students.

Since it was formed in 1968, the College of Business Administration has been noted for its commitment to instruction and for promoting close student-faculty partnerships in the learning process. Business course enrollments are kept relatively small to facilitate student-faculty interaction. Business faculty act as advisors to undergraduate students and are encouraged to support student extracurricular activities in order to foster further opportunities for learning.

The College of Business Administration incorporates computer applications in many of its business courses. Moreover, the college is determined to weave computer applications appropriately throughout its program requirements.

The professional education offered by the College of Business Administration builds on an academic foundation in the liberal arts. To support their upper-division business studies, all undergraduate business majors take courses in mathematics, economics, the social sciences, and written and oral communication. For this reason, business majors take few business courses during their freshman and sophomore years. Most business course requirements are concentrated in the junior and senior years.

COBA Advising Center

Location: Kepner 2065
Telephone: 351-1233
Robert Elton, Advising Coordinator
Margaret Rusch, Staff Assistant

The College of Business Administration Advising Center provides academic advising for all general business majors and business minors. In addition, the Advising Center provides backup advising services for all other COBA majors.

Accounting Department

Location: Kepner 2090E
Telephone: 351-2855
Allen McConnell, Chair

Professors — Paul Bohrer, MS, CPA; John Elsea, PhD, CPA; Allen McConnell, MS, CPA

Associate professors — Bill Cox, PhD, CPA; Martha Lilly, PhD, CPA; Ronald Reed, PhD, CPA; John Stewart, PhD, CPA

Assistant professors — Paul Donadio, MS, CPA; Pauline Jaouen, MA, CPA; Calvin Kennedy, PhD, CPA; Susan Mardock, MBA, CPA

Instructor — Robert Elton, MA, CPA

Finance Department

Location: Kepner 1090E
Telephone: 351-2275
Garth Allen, Chair

Associate professors — Garth Allen, JD, CPCU; Glen Droegemueller, JD

Assistant professors — John Clinebell, DBA; Lynn Karowsky, JD; Thomas Johansen, MBA; Donna Johnston-Blair, MBA

Instructors — Jon Ewert, MBA; James Haskins, MS

Management Department

Location: Kepner 1090E
Telephone: 351-2088
Lynn Hoffman, Chair

Professors — James Clinton, PhD

Associate professors — D. Lynn Hoffman, PhD; Donald Park, PhD

Assistant professors — Sharon Clinebell, DBA; Daniel Rowley, PhD

Instructor — Lee Cooper, BS

Marketing Department

Location: Kepner 2090E
Telephone: 351-2366
R. Viswanathan, Chair

Professor — Joseph Clithero, MS

Associate professors — Robert C. Harris, MA; Lawrence Levenson, MBA

Assistant professors — Gwen Fontenot, PhD; Walter Kendall, PhD; Sukbaum Pahng, PhD; R. Viswanathan, PhD

Instructors — John Bennett, MBA; Randy Eck, MS

Computer Information Systems Department

Location: Kepner 1095
Telephone: 351-2089
Charmayne Cullom, Chair

Professors — Carol Dierks, PhD; William Duff, Jr., PhD; Robert Lynch, PhD; Steve Teglovic, Jr., PhD

Associate professors — Charmayne Cullom, PhD; R. John Freese, PhD

Assistant professors — Ethel Kloos Fenn, PhD; John Gibson, MS; David Stamper, MA

Instructors — Helen Freese, MS; Joy Keyser, MS

Business Major Requirements (all emphases)

Admission Requirements

Freshman students are admitted to the College of Business Administration (COBA) as follows:

- Applicants with an ACT of 23 or higher or applicants who graduated in the top 10 percent of their high school class will be admitted into any emphasis offered by COBA.

- Applicants not meeting the standard specified in the preceding paragraph, but who have met the unconditional University entrance requirements will be admitted into COBA's general business emphasis.

Students admitted to the University who have not met the unconditional University admission requirements must complete a minimum of 40 semester hours of University course work and meet the departmental requirements for a business major before applying for admission to the College of Business Administration.

Transfer students are admitted to the College of Business Administration (COBA) as follows:

- Applicants who transfer to the University after completing 40 semester hours of college level course work with at least a 2.5 GPA (on a 4 point scale) will be admitted to any emphasis offered by COBA.

- Applicants not meeting the standards specified in the preceding paragraph, but who have at least a 2.0 GPA in transfer credit (on a 4 point scale) will be admitted into COBA's general business emphasis.

Business Minors Admission Requirements

Admission requirements for the Business Administration minor are the same as the requirements for admission and change to COBA's general business emphasis.

Admission requirements for the Computer Information System minor are the same as the requirements for admission and change to COBA's Computer Information Systems emphasis.

Change of Major Requirements

UNC students may change their business emphasis area as follows:

• **General Business** — Students who have completed at least 15 semester hours at UNC with at least a 2.0 GPA will be accepted into the general business emphasis.

Students admitted to the University who have not met the unconditional University admission requirements must complete a minimum of 40 semester hours of University course work and meet the departmental requirements for a business major before they can change their major to Business Administration.

• **All other COBA emphases** — UNC students may be admitted into other COBA emphasis areas provided they have completed more than 40 semester hours of college level course work with at least 15 semester hours (one semester) at UNC. In addition, students must meet the requirements set by the faculty in the emphasis area in which they wish to major. Students may obtain the specific requirements for each business emphasis area from the appropriate department office.

Students must meet departmental requirements in effect at the time of application for a change of major.

Graduation Requirements

1. To graduate with a baccalaureate degree in Business Administration a student must complete a minimum of 126 semester hours of University course work. Students should plan to satisfy the following requirements within the 126 semester hour total:

- a. University requirements (e.g., English essay, General Education, etc.) and;
- b. College of Business Administration requirements (e.g., Business Core, Other Required Courses, emphasis area requirements, etc.) and;
- c. Elective course work to bring the total to at least 126 semester hours.

2. Business students must also meet both the following course distribution requirements to graduate:

A minimum of 54 semester credits in non-business course work must be included in a 126 hour baccalaureate degree program. If a student's degree program exceeds 126 semester hours, at least 40 percent of the total semester credits taken for the degree must be in non-business course work. A student must pay particular attention to fulfilling this requirement if he or she takes a double major in business subjects, or combines a business major with a minor in Computer Information Systems.

The course distribution requirements apply to the total credits required to complete the baccalaureate degree program regardless of whether the courses were taken at UNC or transferred from another institution.

Double Majors (Emphases) and Minors within the College of Business Administration

Students who intend to double major (graduate with two majors) within the College of Business Administration or who plan to combine a Business Administration major with a minor in Computer Information Systems must have their programs approved by their faculty advisors and obtain the written approval of the College of Business Administration Advising Coordinator.

Continuation Requirements

To graduate with a bachelor's degree in business, students must attain a 2.0 ("C") cumulative grade point average in the course work taken in COBA. Students achieving less than the required cumulative grade point average for any two consecutive semesters may be denied continuation of their business program.

Time Limitation on Credit Earned Toward a Bachelor's Degree

Courses completed within the preceding 10 years may apply toward a bachelor's degree. After 10 years, course work is reviewed by the department head to determine its appropriateness to the requirements.

COBA Expectations of Students

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:

1. A failing grade for a particular assignment.
2. A failing grade for a particular course.
3. Suspension from the College of Business Administration.
4. Expulsion from the College of Business Administration.

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 courses at any time by the instructor, department chairman, or dean.

The University Incomplete Policy stipulates that an instructor may give a grade of incomplete *only* if a student cannot take a final exam because of hospitalization or a death in the family. COBA adheres to this policy.

A student must have attained at least junior standing prior to enrolling in any 300 or 400 level COBA class.

Bachelor of Science in Business Administration

Emphasis in Accounting

Program Requirements

Complete the General Education program as outlined.....	40
Complete other required courses.....	6
Complete the business core as outlined.....	30
Complete the required program courses specified here.....	30
Complete the program electives specified here.....	3
Complete general electives to total	126

The primary objective of the accounting program is to provide a broad practical and theoretical background in several areas of accounting including financial accounting, taxation, cost and managerial, accounting systems, and auditing.

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.

General Education

Category 1b — Intermediate Composition

BACS 205 Business Writing with Computers	3
ENG 123 College Research Paper.....	3

Note — Students are required to select either ENG 123 or BACS 205.

Category 2 — Mathematics

MATH 175 Topics in Finite Mathematics.....	3
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note — Students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5.

Other Required Courses — 6 semester hours

SPCO 100 Basics of Public Speaking	3
MATH 176 Topics in Calculus.....	3

Business Administration Core — 30 semester hours

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.....	3
BAMG 456 Business Policies.....	3
BAMK 360 Marketing.....	3

Required Courses — 30 semester hours

BAAC 320 Intermediate Accounting I.....	3
BAAC 321 Intermediate Accounting II	3
BAAC 323 Cost and Managerial Accounting I.....	3
BAAC 326 Governmental and Institutional Accounting	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
BAFN 332 Business Administration and the Law.....	3

Elective Courses — 3 semester hours

BAAC 324 Cost and Managerial Accounting II	3
BAAC 426 Auditing II	3
BAAC 429 Income Tax II.....	3

Notes

A maximum of 60 percent of a student's total hours completed at the time of graduation can be business courses.

A maximum of 25 percent of a student's total hours completed at the time of graduation can be upper division (300 or 400 level) accounting courses. (BAAC prefix)

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 accounting courses completed at the University of Northern Colorado.

A student transferring from another four-year institution shall be allowed to transfer a maximum of nine 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 that "C or better" course prerequisites (as indicated in the course descriptions) must be satisfied.

The accounting department policy regarding prerequisites states: 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

Complete the General Education program as outlined.....	40
Complete other required courses.....	6
Complete the business core as outlined	30
Complete the required program courses specified here.....	27
Complete the program electives specified here.....	6
Complete general electives to total	126

The primary focus of the computer information systems emphasis is to prepare students to investigate, design, and develop computer systems for business decision making. 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. 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.

General Education

Category 1b — Intermediate Composition

BACS 205 Business Writing with Computers	3
ENG 123 College Research Paper	3

Note — Students are required to select either ENG 123 or BACS 205.

Category 2 — Mathematics

MATH 175 Topics in Finite Mathematics	3
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note — Students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5.

Other Required Courses — 6 semester hours

SPCO 100 Basics in Public Speaking.....	3
MATH 176 Topics in Calculus.....	3

Business Administration Core — 30 semester hours

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.....	3
BAMG 456 Business Policies.....	3
BAMK 360 Marketing.....	3

Required Courses — 27 semester hours

BAAC 327 Managerial Accounting	3
BACS 285 Structured COBOL Programming.....	3
BACS 380 Data Communications Systems	3
BACS 385 Advanced Structured COBOL Programming.....	3
BACS 386 Database Management Systems.....	3
BACS 388 Systems Analysis and Design	3
BACS 390 Business Statistics II	3
BACS 488 Advanced Systems Analysis and Design	3
BAMG 453 Human Resources Management	3

Elective Courses — 6 semester hours

BACS 480 Fourth and Fifth Generation Systems.....	3
BACS 482 Decision Support Systems	3
BACS 486 Advanced Database Management	3
BACS 495 Special Topics in CIS.....	3

Notes

High school students interested in majoring in CIS should pursue a college preparatory program in high school. While no specific courses are required, their high school program should give them a sound background in the sciences, mathematics, communications, and the humanities.

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 BAAC 221, BACS 291, BACS 300, and any of the courses listed in the CIS emphasis for the courses to count toward graduation.

A Business Administration major with an emphasis in Computer Information Systems can take no more than 6 elective semester credits in Business Administration courses.

Bachelor of Science in Business Administration

Emphasis in Finance

Program Requirements

Complete the General Education program as outlined.....	40
Complete other required courses.....	6
Complete the business core as outlined.....	30
Complete the program courses specified here.....	18
Complete the program electives specified here.....	9
Complete general electives to total.....	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 markets, and investments.

The emphasis in finance prepares students for careers in financial management of organizations or financial institutions. Graduates are prepared for entry level positions in financial management of large and small businesses, financial institution positions, and investment related positions.

General Education

Category 1b — Intermediate Composition

BACS 205 Business Writing with Computers.....	3
ENG 123 College Research Paper.....	3
Note — Students are required to select either ENG 123 or BACS 205.	

Category 2 — Mathematics

MATH 175 Topics in Finite Mathematics.....	3
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics.....	3
ECON 105 Introduction to Economics: Microeconomics.....	3
PSCI 105 Introduction to Political Science.....	3
PSY 120 Principles of Psychology.....	4
SOC 100 Principles of Sociology.....	3

Note — Students are required to take ECON 103 and ECON 105 and two additional courses listed above.

Other Required Courses — 6 semester hours

SPCO 100 Basics of Public Speaking.....	3
MATH 176 Topics in Calculus.....	3

Business Administration Core — 30 semester hours

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.....	3
BAMG 456 Seminar In Business Policies.....	3
BAMK 360 Marketing.....	3

Required Courses — 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

Elective Courses — 9 semester hours

BAFN 340 Principles of Risk and Insurance.....	3
BAFN 372 Introduction to Real Estate.....	3
BAFN 473 Commercial Bank Management.....	3
BAFN 479 Security Analysis.....	3

Note

A Business Administration major with an emphasis in finance can take no more than 12 elective semester credits in Business Administration courses.

Bachelor of Science in Business Administration

Emphasis in General Business

Program Requirements

Complete the General Education program as outlined.....	40
Complete other required courses.....	6
Complete the Business Core as outlined.....	30
Complete the required program courses specified here.....	30
Complete general electives to total	126

The general business program consists of courses 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. In addition, it provides a sound preparation for law school and further specialized graduate study. The entire College of Business Administration faculty participate in offering courses in this program.

General Education

Category 1b — Intermediate Composition

BACS 205 Business Writing with Computers	3
ENG 123 College Research Paper.....	3

Note — Students are required to select either ENG 123 or BACS 205.

Category 2 — Mathematics

MATH 175 Topics in Finite Mathematics	3
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note — Students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5.

Other Required Courses — 6 semester hours

SPCO 100 Basics of Public Speaking	3
MATH 176 Topics in Calculus	3

Business Administration Core — 30 semester hours

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.....	3
BAMG 456 Business Policies.....	3
BAMK 360 Marketing.....	3

Required Courses — 30 semester hours

BAAC 327 Managerial Accounting	3
BAAC 329 Introduction to Income Tax	3
BACS 283 Business Microcomputer Systems.....	3
BACS 390 Business Statistics II	3
BAFN 332 Business Administration and the Law.....	3
BAFN 340 Principles of Risk and Insurance.....	3
BAFN 470 Financial Management.....	3
BAMG 354 Organizational Behavior.....	3
BAMK 362 Marketing Strategy	3
BAMK 368 Marketing Analysis and Research I	3

Notes

A Business Administration major with an emphasis in general business can take no more than 6 elective semester credits in Business Administration courses.

No more than 9 semester hours of 300 and 400 level courses can be transferred in for the general business emphasis required courses.

Bachelor of Science in Business Administration

Emphasis in Management

Program Requirements

Complete the General Education program as outlined.....	40
Complete other required courses.....	6
Complete the business core as outlined	30
Complete the required program courses specified here.....	27
Complete the program electives specified here.....	3
Complete general electives to total	126

The focus of the major is on learning how to plan, direct, and control such resources as people, time, capital, raw materials, and equipment. This focus will require the student to examine and understand issues and problems that confront society. They will learn how to manage, motivate, and direct employees.

The outcome of this program is the training for entry level managerial or administrative positions in business or governmental agencies. Such positions include management trainees, supervisors, administrators, and other entry level positions.

General Education

Category 1b — Intermediate Composition

BACS 205 Business Writing with Computers	3
ENG 123 College Research Paper.....	3

Note — Students are required to select either ENG 123 or BACS 205.

Category 2 — Mathematics

MATH 175 Topics in Finite Mathematics	3
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Note — Students are required to take ECON 103 and ECON 105 and two additional courses listed above.

Other Required Courses — 6 semester hours

SPCO 100 Basics of Public Speaking	3
MATH 176 Topics in Calculus.....	3

Business Administration Core — 30 semester hours

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.....	3
BAMG 456 Seminar In Business Policies	3
BAMK 360 Marketing.....	3

Required Courses — 27 semester hours

BAAC 327 Managerial Accounting	3
BACS 283 Business Microcomputer Systems.....	3
BACS 390 Business Statistics II	3
BAMG 354 Organizational Behavior.....	3
BAMG 357 Managing New Business Ventures.....	3
BAMG 452 Business, Government, and Society.....	3
BAMG 453 Human Resources Management	3
BAMG 457 Managing Complex Organizations.....	3
BAMG 458 International Management.....	3

Elective Courses — 3 semester hours

BAFN 470 Financial Management	3
BAMG 407 Small Business Counseling	3
BAMG 454 Human Resources Development	3
BAMG 455 Industrial Relations	3
BAMK 362 Marketing Strategy	3

Notes

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 Courses — 27 semester hours and Elective Courses — 3 semester hours) in order for the courses to count toward graduation.

A Business Administration major with an emphasis in management can take no more than 9 elective semester credits in Business Administration courses.

Bachelor of Science in Business Administration

Emphasis in Marketing

Program Requirements

Complete the General Education program as outlined.....	40
Complete other required courses.....	6
Complete the business core as outlined	30
Complete the required program courses specified here.....	15
Complete program electives specified here	15
Complete general electives to total	126

The primary focus of the marketing program is to provide the students with a common body of knowledge that is empirically and conceptually sound in several areas in marketing including target marketing, product, price promotion and distribution.

An emphasis in marketing is designed to prepare students for a broad range of marketing positions in public, private, governmental, and nonprofit organizations. Some of the positions in marketing for which the student can prepare include brand management, retail management, advertising, marketing research, channel management, professional selling, and sales management.

General Education

Category 1b — Intermediate Composition

BACS 205 Business Writing with Computers	3
ENG 123 College Research Paper.....	3
Note — Students are required to select either ENG 123 or BACS 205.	

Category 2 — Mathematics

MATH 175 Topics in Finite Mathematics	3
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Category 5 — Social Sciences

ECON 103 Introduction to Economics: Macroeconomics	3
ECON 105 Introduction to Economics: Microeconomics	3
PSCI 105 Introduction to Political Science	3
PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3
Note — Students are required to take ECON 103 and ECON 105 and two additional courses listed in Category 5.	

Other Required Courses — 6 semester hours

SPCO 100 Basics of Public Speaking	3
MATH 176 Topics in Calculus.....	3

Business Administration Core — 30 semester hours

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.....	3
BAMG 456 Seminar In Business Policies	3
BAMK 360 Marketing.....	3

Required Courses — 15 semester hours

BAAC 327 Managerial Accounting	3
or	
BAFN 470 Financial Management	3
BAMK 361 Consumer Behavior	3
BAMK 362 Marketing Strategy	3
BAMK 368 Marketing Analysis Research I	3
BAMK 462 Marketing Problems	3
Note — Students are required to take either BAFN 470 or BAAC 327.	

Elective Courses — 15 semester hours

Take any two 300 level courses.

BAMK 363 Promotional Strategy	3
BAMK 364 Personal Selling	3
BAMK 365 Advertising.....	3
BAMK 366 Retailing	3
BAMK 367 Public Policy Issues in Marketing	3

Take any three 400 level courses.

BAMK 461 Advertising Campaigns.....	3
BAMK 463 Sales Management	3
BAMK 464 International Marketing.....	3
BAMK 465 Seminar in Retailing.....	3
BAMK 466 Market Analysis and Research II	3
BAMK 468 Industrial Marketing.....	3
BAMK 469 Distribution Management	3

Notes

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.

A Business Administration major with an emphasis in marketing can take no more than 9 elective semester credits in Business Administration courses.

Minor in Business Administration: 30 semester hours

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.

Required Courses — 30 semester hours

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.....	3
BAMK 360 Marketing.....	3
MATH 176 Topics in Calculus.....	3

Note

Students may transfer a maximum of 18 semester hours toward the minor from other institutions.

Minor in Computer Information Systems: 18 semester hours

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 Courses — 12 semester hours

BACS 380 Data Communications Systems	3
BACS 386 Database Management Systems.....	3
BACS 388 Systems Analysis and Design	3
BACS 480 Fourth and Fifth Generation Languages	3

Elective Courses — 6 semester hours

BACS 285 COBOL Programming.....	3
BACS 385 Advanced COBOL Programming.....	3
BACS 482 Decision Support Systems	3
BACS 486 Advanced Database	3
BACS 488 Advanced Systems Analysis and Design	3

Note

Business majors who wish admission to a Computer Information Systems minor must obtain prior written approval from the College of Business Advising Coordinator. At least 40 percent of a student's total degree program (including major and minor requirements) must be in non-business course work.

To graduate with a Computer Information Systems minor, a student must attain at least a "C" grade in each course required for the minor.

College of Education

Counseling/School Psychology	143
Educational Administration	155
Educational Media and Technology	158
Elementary Education and Reading..	160
Special Education.....	165
Certification Programs.....	174
Minors	179

Location: McKee Hall 518
Telephone: 351-2817
Gene E. Hall, Dean
Kyle R. Carter, Associate Dean
Michael J. Gimmestad, Associate Dean
Harvey Rude, Assistant Dean
Sandra Simmons, Assistant Dean

The College of Education is a professional college offering specialized undergraduate certification 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 psychologists, as well as 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.

Programs in the College of Education are accredited by the National Council for the Accreditation of Teacher Education (NCATE), and are approved for certification by the Colorado Department of Education. Several programs also hold specialty accreditations.

The College is composed of four divisions: Division of Elementary, Middle School, Early Childhood Education and Reading; Division of Professional Studies; Division of Research, Evaluation and Development; and Division of Special Education. In addition, the College operates the Teacher Education Center, which administers the University-wide professional teacher education program. Other major units in the College are the Laboratory School, the Center for Research in Teaching and Learning, and the Colorado State Office of the North Central Association.

The Division of Elementary, Middle School, Early Childhood Education and Reading

Location: McKee Hall 227
Telephone: 351-2702
Director: Bruce W. Broderius

Professors — Bruce W. Broderius, EdD; Arnold H. Burron, EdD; Douglas S. Burron, EdD; Jo-Ann M. Mullen, EdD; Fredrick L. Silverman, EdD; John H. Swaim, EdD; Elaine V. Vilscek, PhD; Phillip M. Wishon, PhD

Associate professor — Richard L. Needham, EdD

Assistant professors — Karen Daves, EdD; Lyman Hunter, PhD; Marcia L. Oreskovich, MA; Deborah A. Powell, EdD

The Division of Elementary, Middle School, Early Childhood Education and Reading administers programs in elementary education, early childhood education, middle school education, and reading at the undergraduate and graduate levels. These programs provide opportunities for students to become teachers and for experienced teachers to enhance their professional expertise through a variety of experiences, ranging from orientation in the field for freshmen, to conducting research for doctoral students.

Faculty in these programs are committed to delivering individualized instruction for students in the degree programs. Degrees may be pursued in program areas through traditional and alternative modes. Courses in program areas include instruction in classrooms as well as in learning laboratory facilities and, off campus, in field-based practica and internship settings. Faculty serve as models through their own teaching behaviors, attempting to encourage pre-service and inservice teachers to acquire and implement the philosophy that learning must be efficiently directed to meet pupils' individual needs through varied teaching modes.

Student and faculty research is directed toward the study of learners from birth to adult maturity. Research sites available to undergraduate and graduate students include the Campus Child Care Center, the Reading Center, the UNC Preschool, the Laboratory School (K-12), and public as well as private schools.

The Division of Professional Studies

Location: McKee Hall 419
Telephone: 351-2861
Director: Arthur R. Partridge

College Student Personnel Administration
Sue Spooner, Coordinator of College Student Personnel Administration

Professors — James K. Bowen, EdD; Bernard C. Kinnick, EdD; Nancy A. Scott, PhD; David W. Smart, PhD; Douglas L. Stutler, PhD

Associate professors — Sue E. Spooner, PhD; Gerald E. Tanner, PhD

Assistant professors — Robert P. Merz, EdD; Charles E. Selden, MA

Educational Administration
Glenn B. Schroeder, Coordinator of Educational Administration Programs

Professors — Arthur R. Partridge, EdD; Glenn B. Schroeder, PhD

Assistant professors — Thomas J. Gavin, PhD; Lawrence W. Goslin, EdD; Kenneth Humphrey, EdD; Kathryn S. Whitaker, PhD

In addition to the degree programs offered, various certification programs are available. Completion of an approved certification program constitutes the basis for institutional recommendation for administrative certification in Colorado as well as many other states. Further information about certification requirements may be obtained from the program office. Certification programs are briefly described following the description of degree programs.

Students seeking Colorado endorsement for initial Colorado certification should contact the Teacher Education Center in McKee Hall for state proficiency examination requirements and minimum requirements related to mainstreaming of special education students.

Students entering a degree program will be expected to meet the requirements of the officially approved program in effect at the time of their admission. The student's advisor, however, has the prerogative of waiving specific course requirements on the basis of the student's previous experience and education.

Professional Psychology
Location: McKee Hall 248
Telephone: 351-2731
Elizabeth J. Rave, Coordinator of School Psychology Programs
Judith A. Praul, Coordinator of Counseling Psychology Programs

Professors — Margaret T. Blake, PhD; Michael J. Gimmestad, PhD; Byron E. Norton, EdD; Wendell A. Osorno, PhD; Judith A. Praul, EdD; Elizabeth J. Rave, EdD; Nancy A. Scott, PhD; Sarah F. Shaw, EdD; I. David Welch, EdD

Associate professors — David N. Bolocofsky, PhD; Christine W. Burns, PhD; Ellis P. Copeland, PhD; William M. Walsh, PhD

Assistant professors — David M. Gonzalez, PhD; Dorothy Simpson Taylor, PhD

Professional psychology offers graduate programs in the fields of counseling 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 doctoral program in school psychology is fully accredited by the American Psychological Association and the National Association of School Psychologists. The M.A. counseling programs and the Ed.D. program in Counselor Education are accredited by the Council for Accreditation of Counseling and Related Educational Programs.

The Division of Research, Evaluation and Development

Location: McKee 101
Telephone: 351-2807
Director: David Roat

Educational Psychology
Location: McKee Hall 101
Telephone: 351-2807

Professors — Kyle R. Carter, PhD; Jeanne E. Ormrod, PhD; Dale Shaw, PhD; H. Lee Swanson, PhD

Associate professors — John B. Cooney, PhD; Randy J. Lennon, PhD

Assistant professors — Kathryn F. Cochran, PhD; Mark Conostas, PhD; Teresa McDevitt, PhD; Robert Walker, 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 101
Telephone: 351-2807

Assistant professors — Joseph Lounge, EdD; Eric E. Smith, PhD; Ellen D. Wagner, PhD

The Educational Technology faculty administer graduate degree programs in Educational Technology and Educational Media, as well as graduate non-degree teacher certification programs in Educational Media. These certification programs lead to endorsement by the State of Colorado Department of Education as an Educational Media Specialist.

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 101
Telephone: 351-2807

Professors — Michael Jacobs, EdD; David Roat, PhD; Dean Turner, PhD

Assistant professor — John Halcon, 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: 351-2691
Director: Allen Huang

Professors — Clifford Baker, EdD; Antonio Carvajal, EdD; James DeRuiter, PhD; B. Robert Gonzales, EdD; J. Melvin Lane, EdD; Wilbur Millislagle, EdD; H. Robert Reinert, EdD; Dean Tuttle, EdD; James Walker, EdD; Mel Weishahn, EdD

Associate professors — Carol Gearheart, EdD; Judy Gilbert, EdD; Allen Huang, EdD; David Kappan, MA; Norman Resnick, PhD; Harvey Rude, EdD

Assistant professors — Julia Batten, PhD; George Betts, EdD; Terry Deniston, MEd; Karen Dilka, PhD; Lewis Jackson, EdD; LeAnn Olson, MS; Gwendolyn Walker, MEd

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 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.

The Teacher Education Center

Location: McKee Hall 282
Telephone: 351-2430
Sandra Simmons, Assistant Dean

Professor — Donald K. Adams, EdD

Admission to the Professional Teacher Education Program

Professional Teacher Education (PTE) consists of a set of experiences, courses, and proficiency examinations applicable to all students in a teacher certification program. All students seeking teacher certification must apply for admission to PTE. The course EDFE 270, Field-Based Experience, is the entry-level course in the PTE program, and is taken as part of the process of applying for admission to PTE. Upon completion (or transfer) of 30 semester hours, with a cumulative GPA of at least 2.50, the student should enroll in EDFE 270. In that course students will be assigned a field experience, attend weekly seminars, and complete the PTE application process. The full application process must be completed during the semester that the student is enrolled in EDFE 270.

Field Experiences

Practical experience is an integral part of the University of Northern Colorado's teacher preparation program. With the cooperation of the public and private schools, UNC offers students seeking certification a variety of experiences in elementary, middle and secondary schools. Field experience is available from the freshman year through the graduate level. All field placements are made in the Teacher Education Center under the policies of the Professional Education Council and in cooperation with the academic departments. Additional information is available from the Teacher Education Center.

Student Teaching

Student teaching candidates are required to attend one of several student teaching meetings during the first week of the semester preceding the semester that student teaching is requested. Students interested in out-of-state or international assignments must attend the application meeting two semesters before the assignment. The following requirements must be met before a student may request a student teaching assignment:

- full admission to Professional Teacher Education
- clearance by the UNC Health Center
- compliance with all specific academic department requirements for entering student teaching, including completion of the required methods course(s), attainment of specific academic department course, competency, and GPA requirements, appropriate clinical experiences, and the departmental recommendation for admission to student teaching.

Graduate Internship Program

The Graduate Internship Program for professionals in education combines a year-long classroom teaching experience with continued education. Although the program is especially appropriate for the beginning teacher who wishes to gain confidence in a first-year induction program and for the non-traditional learner who is reentering the teaching profession, applications are accepted from individuals having 1) a baccalaureate degree, 2) a current Colorado teaching certificate, and 3) a cumulative GPA of at least 2.75.

Internships provide structured, supervised, on-the-job training at either the elementary or secondary level and are available in a variety of subject areas in various school districts throughout the Denver metropolitan, Front Range area, and in northern Colorado. Placement is determined by school district officials in consultation with the Graduate Internship program staff and the applicant. Interns are paid a monthly stipend while earning 10 semester hours of graduate credits. In-state tuition and fees are paid by the program. For more information, contact the Graduate Internship Program, University of Northern Colorado, Greeley, Colorado 80639, phone (303) 351-2546.

Master of Arts in Agency Counseling

Program Requirements

Complete the required courses specified here.....49

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 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 professionals skilled in helping people with personal, career and leisure concerns in educational institutions and community agencies. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

The Agency Counseling program at the master's level prepares a professional 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 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 course work and a minimum score of 40 on the MAT.

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 subsequent to 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 subsequent to receiving the baccalaureate degree and before admission.

Required Courses — 49 semester hours

<i>Core Requirements</i>	
EPRE 530 Life Span Development	3
EPRE 540 Principles and Theories of Learning	3
EPRE 600 Introduction to Graduate Research	3
PPSY 607 Theories of Counseling	2
PPSY 610 Theories of Personality	2
PPSY 652 Legal Issues in Counseling	1
PPSY 653 Ethical Issues in Counseling	1
PPSY 670 Psychological Testing and Measurement	3
<i>Additional Requirements</i>	
PPSY 558 Abnormal Psychology	3
PPSY 565 Psychology of Prejudice.....	2
<i>or</i>	
PPSY 623 Understanding and Counseling Minorities	2
PPSY 612 Practicum in Individual Counseling	4
PPSY 616 Career Guidance, Counseling and Placement	2
PPSY 655 Community Psychology and Social Systems	3
PPSY 659 Group Lab Experience: Agency	1
PPSY 661 Consultation in Counseling	1
PPSY 662 Group Dynamics and Facilitation	2
PPSY 665 Family Systems	2
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 courses specified here.....45
 Complete emphasis area courses specified here 10

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 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 professionals skilled in helping people with personal, career and leisure concerns in educational institutions and community agencies. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

The emphasis area is understood to deal 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

In addition to 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 course work and a minimum score of 40 on the MAT.

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 subsequent to 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 subsequent to receiving the baccalaureate degree and before admission.

Required Courses — 45 semester hours

Core Requirements

EPRE 540 Principles and Theories of Learning	3
EPRE 600 Introduction to Graduate Research	3
PPSY 607 Theories of Counseling	2
PPSY 610 Theories of Personality	2
PPSY 652 Legal Issues in Counseling	1
PPSY 653 Ethical Issues in Counseling	1
PPSY 670 Psychological Testing and Measurement	3

Additional Requirements

PPSY 558 Abnormal Psychology	3
PPSY 565 Psychology of Prejudice.....	2
<i>or</i>	
PPSY 623 Understanding and Counseling Minorities	2
PPSY 612 Practicum in Individual Counseling	4
PPSY 616 Career Guidance, Counseling, and Placement	2
PPSY 655 Community Psychology and Social Systems	3
PPSY 659 Group Lab Experience: Agency	1
PPSY 661 Consultation in Counseling	1
PPSY 662 Group Dynamics and Facilitation	2
PPSY 665 Family Systems	2
PPSY 673 Individual Tests of Intelligence and Personality	2
PPSY 692 Externship	8

Emphasis Area Courses — 10 semester hours

PPSY 664 Therapeutic Parenting	2
PPSY 666 Couple and Marriage Therapy	2
PPSY 667 Human Sexuality for Counselors.....	2
PPSY 668 Principles of Sex Therapy	2
PPSY 695 Seminar: Contemporary Issues in Family Therapy	2

Note

Comprehensive examination required

Master of Arts in Elementary School Counseling

Program Requirements

Complete the required courses specified here.....48-49

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 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 professionals skilled in helping people with personal, career and leisure concerns in educational institutions and community agencies. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

The 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 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 course work and a minimum of 40 on the MAT.

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 subsequent to 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

See section on School Counselor certification. Courses listed, if not previously taken, must be added to the program.

Two years of teaching or relevant work experience involving human interactions subsequent to receiving the baccalaureate degree and before admission.

Required Courses — 48-49 semester hours

Core Requirements

EPRE 540 Principles and Theories of Learning	3
EPRE 600 Introduction to Graduate Research	3
EPRE 630 Child and Adolescent Psychology	3
PPSY 607 Theories of Counseling	2
PPSY 610 Theories of Personality	2
PPSY 652 Legal Issues in Counseling	1
PPSY 653 Ethical Issues in Counseling	1
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 Lab Experience: School	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 613 Externship in Counseling with Children	5
PPSY 615 Counseling Practicum: School	3
or	
PPSY 612 Practicum in Individual Counseling	4
PPSY 671 Testing: Analysis and Interpretation	2
Elective	2

Note

Comprehensive examination required

Master of Arts in Secondary and Post-Secondary School Counseling

Program Requirements

Complete the required courses specified here.....48-49

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 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 professionals skilled in helping people with personal, career and leisure concerns in educational institutions and community agencies. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

The 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 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 course work and a minimum of 40 on the MAT. 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 subsequent to 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

See section on School Counselor Certification. Courses listed, if not previously taken, must be added to the program.

Two years of teaching or relevant work experience involving human interactions subsequent to receiving the baccalaureate degree and before admission.

Required Courses — 48-49 semester hours

Core Requirements

EPRE 540 Principles and Theories of Learning	3
EPRE 600 Introduction to Graduate Research	3
EPRE 630 Child and Adolescent Psychology	3
PPSY 607 Theories of Counseling	2
PPSY 610 Theories of Personality	2
PPSY 652 Legal Issues in Counseling	1
PPSY 653 Ethical Issues in Counseling	1
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: School	1
PPSY 606 Theories and Practices in Group Guidance	2
PPSY 608 Organization, Administration and Consultation in Guidance	

Services

PPSY 611 Externship in Guidance Services	5
PPSY 614 Externship in Counseling with Youth and/or Adults	5

PPSY 615 Counseling Practicum: School	3
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or

PPSY 612 Practicum in Individual Counseling	4
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PPSY 671 Testing: Analysis and Interpretation	2
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Elective	2
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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 courses specified here.....50-51

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 professional preparation for students in 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 professionals skilled in helping people with personal, career and leisure concerns in educational institutions and community agencies. The requirements of the program are conceptualized within the framework and standards set forth by the counseling profession, Colorado state law, Graduate School and job requirements.

Admission

In addition to 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 course work and a minimum of 40 on the MAT. 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 subsequent to 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 subsequent to receiving the baccalaureate degree and before admission.

Required Courses — 50-51 semester hours

Core Requirements

EPRE 540 Principles and Theories of Learning	3
EPRE 600 Introduction to Graduate Research	3
PPSY 607 Theories of Counseling	2
PPSY 610 Theories of Personality	2
PPSY 652 Legal Issues in Counseling	1
PPSY 653 Ethical Issues in Counseling	1
PPSY 670 Psychological Testing and Measurement	3

Additional Requirements

CSPA 583 Crisis Intervention	1
CSPA 650 College Environment and Student Development: Theory and Research	4
CSPA 651 Philosophical, Historical, and Cultural Foundations of Student Affairs in Higher Education	3
CSPA 658 Management and Administration Styles in Student Affairs	4
CSPA 675 Field Experience in Student Affairs	2
PPSY 604 Career Development and Occupational Information Systems	2
PPSY 605 Group Laboratory Experience: School	1
PPSY 606 Theories of Group Guidance	2
PPSY 612 Practicum in Individual Counseling	4
<i>or</i>	
PPSY 615 Counseling Practicum: School	3
PPSY 623 Understanding and Counseling Minorities	2
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 courses specified here.....	55
Complete program electives 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 personnel administration positions at the highest levels.

For more detail request a copy of the program handbook from the program coordinator.

Admission

In addition to the admission requirements of the Graduate School, the student must have a baccalaureate degree from an accredited institution, successful experience in student affairs work, and an acceptable personal interview with the program admissions committee. A master's degree in student affairs, counseling, or a related field is *strongly* recommended.

Prerequisites

EPRE 600 or its equivalent in an introductory statistics and research course. Students who possess only a baccalaureate degree must earn a minimum of 94 graduate semester hours.

Required Courses — 55 semester hours

<i>Core Requirements</i>	
CSPA 650 College Environments and Student Development: Theory and Research.....	4
CSPA 651 Philosophical, Historical, and Cultural Foundations of Student Affairs in Higher Education.....	3
CSPA 658 Management and Administration in Student Affairs	4
CSPA 682 Legal Issues in Student Affairs.....	3
CSPA 683 Human Interaction Skills for Student Affairs Professionals	1
CSPA 684 Group Leadership in Student Affairs	3
CSPA 758 Seminar in College Student Personnel Administration.....	1
<i>Choose one of the following:</i>	
CSPA 652 Enrollment Management Services	3
CSPA 653 Services for Environmental and Student Development	3
<i>Directed Study</i>	
CSPA 622 Directed Studies (variable credit and title).....	1-3
Note — At least one credit of CSPA 622 is required. Usually this constitutes an application project related to one of the theory courses in	

Field Experience or Internship

CSPA 670 Internship in College Student Personnel Administration	6
CSPA 675 Field Experience in Student Affairs: (variable subtitle)	2
Note — 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 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 students must obtain a bubble sheet 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 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
Plus one computer related course.....	3
EPRE 700 Advanced Research Methods	3
CSPA 797 Doctoral Proposal Research.....	4
CSPA 799 Doctoral Dissertation	12
Note — EPRE 600 or its equivalent is expected as a prerequisite. Students lacking an introductory statistics course should plan to take EPRE 600 to remedy the deficiency. Credits for this work do not count toward the PhD degree.	

Elective Courses — 9 semester hours

Notes

Research Tool Policy — Competency in two research tools is required of Ph.D. students in CSPA. One of these, *Applied Statistics*, is contained in the curriculum. It requires passing EPRE 603 (or its equivalent in transfer credits) with a grade of B or better, and completion of a minimum of 6 additional semester credits in applied statistics, also with grades of B or better. For the second research tool, the student may choose among three options explained below. Hours taken to satisfy the second research tool requirement may not be included in the total 64 semester hours of doctoral credit required by the Graduate School.

- *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 Applications*: Complete a minimum of 9 semester hours in courses relating to computer use, at the graduate or undergraduate level with grades of B or better. (An alternative method for meeting this option is for the student to complete the Computer Proficiency for Administrators program offered by the Interdisciplinary Center for Educational Technology.)
- *Mathematical Statistics*: Complete STAT 511, STAT 512 (or their equivalent in transfer credits) with grades of B or better.

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 15 semester hours of psychology courses selected with the

Doctor of Education in Counselor Education

Program Requirements

Complete the required courses specified here (minimum)85

This program is accredited by the Council for Accreditation of Counseling and Related Educational Programs.

This program is designed to develop supervisors, consultants, and educators in public and private schools and universities. Emphasis is placed on supervision, instruction, group, consultation, research and evaluation skills.

Admission

Data listed here to be in Professional Psychology office by February 20, with decisions announced by March 31.

- Total score of 1500 for the Verbal, Quantitative, and Analytical subtests of the GRE, is required. The GRE must be taken before February 28 in order to attend the pre-admission workshop and be accepted for the following year.
- A master's degree in counseling or a related area, or the equivalent.
- Three letters of recommendation.
- Grade Point Average of 3.5 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. In situations where attendance at the pre-admission workshop is an extreme hardship for the applicant, special arrangements must be made before February 28. These may include a conference telephone interview with faculty, contact with references, and/or campus interviews at alternate times.

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:

- 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 course work in these areas will need to complete these courses as deficiency course work not to be included in the 85 hours required for the degree. All deficiency course work 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 course work.

Required Courses — 85 semester hours

<i>Counseling Core</i>	
PPSY 702 Practicum in Counseling.....	2
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 Psychology	3
PPSY 660 Systems Analysis and Consultation Theory.....	2
PPSY 681 Systems Intervention Practicum	3
PPSY 667 Human Sexuality for Counselors.....	2
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 Anova and Other Statistics	3
EPRE 700 Advanced Research Methods	3
PPSY 781 Evaluation of Psychological Service.....	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 623 Understanding and Counseling Minorities	2
PPSY 654 Child Abuse and Neglect.....	2
PPSY 659 Violence Against Women and Children.....	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 courses specified here (minimum)99-106

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

Data listed here to be in Professional Psychology office by February 20, with decisions announced by March 31.

- Total score of 1500 for the Verbal, Quantitative, and Analytical subtests of the GRE is required. The GRE must be taken before February 28 in order to attend the pre-admission workshop and be accepted for the following year.
- A master's degree in counseling or a related area, or the equivalent.
- Three letters of recommendation.
- Grade Point Average of 3.5 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. In situations where attendance at the pre-admission workshop is an extreme hardship for the applicant, special arrangements must be made before February 28. These may include a conference telephone interview with faculty, contact with references, and/or campus interviews at alternate times.

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:

Introductory Research
 Tests and Measurement
 Descriptive Statistics
 Developmental/Child/Adolescent/Adult Psychology
 Personality Theories
 Abnormal Psychology
 Career Development and Placement
 Group Counseling/Guidance

Students who have not completed course work in these areas are required to complete these courses as deficiency credits. The deficiencies are *not* included in the 99-106 hours required for the degree. All deficiency course work 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 course work.

Required Courses — 99-106 semester hours

<i>Required Core (All Required)</i>	
PSY 590 History and Systems in Psychology	3
PSY 624 Human Neuropsychology	3
PPSY 655 Community Psychology and Social Systems	3
PPSY 657 Legal/Ethical Aspects of Psychology	3
PPSY 665 Family Systems	2
PPSY 666 Couples and Marriage Therapy	2
PPSY 667 Human Sexuality for Counselors	2
PPSY 668 Principles and Practices of Sex Therapy	2
PPSY 707 Seminar in Personality and Counseling Theories	3
PPSY 758 Advanced Psychopathology	3
<i>Elective Core (Minimum of one course from the following)</i>	
PPSY 616 Career Guidance, Counseling and Placement	2
PPSY 617 Play Therapy: Theory and Practicum	3
PPSY 618 Practicum in Behavior Modification	3
PPSY 628 Behavioral Counseling	2
PPSY 654 Child Abuse and Neglect	2
PPSY 660 Systems Analysis and Consultation Theory	2
PPSY 695 Seminar: Contemporary Issues in Family Therapy	2
<i>Practica (All Required)</i>	
PPSY 693 Practicum in Group Facilitation	4
PPSY 694 Practicum in Family Therapy	4
PPSY 702 Practicum in Counseling	2
PPSY 712 Advanced Practicum in Individual Counseling	4
PPSY 714 Practicum in Supervision of Counseling	3
PPSY 715 Seminar in Counselor Supervision and Theory	2
PPSY 793 Intake Practicum	1
PPSY 794 Clinic Practicum	2
<i>Statistics and Research (All required)</i>	
EPRE 602 Elements of Statistics	3
EPRE 603 Anova and Other Statistics	3
EPRE 700 Advanced Research Methods	3
PPSY 733 Research Apprenticeship (1 hour each semester for two consecutive semesters)	2
<i>Special Populations (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 Understanding and Counseling Minorities	2
PPSY 654 Child Abuse and Neglect	2
<i>Assessment (All required)</i>	
PPSY 675 Intelligence Assessment	3
PPSY 678 Practicum in Personality and Clinical Assessment	5
<i>Internship</i>	
PPSY 791 Internship in Counseling Psychology	12-18
<i>Dissertation</i>	
PPSY 797 Doctoral Proposal Research	4
PPSY 799 Doctoral Dissertation	12
<i>Elective Practica (Recommended)</i>	
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

Master of Arts in Educational Psychology

Program Requirements

Complete the required courses specified here.....	21
Complete program electives specified here	9

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 mid-term exams. All complete applications received by mid-term 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 60 semester 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 — 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 Learning and Cognitive Processes; Research, Measurement and Evaluation; or Human Development. If none of these concentrations meets with the student's needs, an individually tailored concentration can be developed with the advisor.

Required Courses — 21 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 Professional Issues in Educational Psychology/Technology	1
EPRE 663 Apprenticeship	2
EPRE 670 Evaluation: Models and Designs	3
EPRE 674 Measurement I: Educational Testing	3

Elective Courses — 9 semester hours

Learning and Cognitive Processes

Electives are selected in consultation with the advisor to reflect the student's concentration. The Learning and Cognitive Processes emphasis is intended to provide the educational practitioner with a better understanding of the cognitive processes involved with learning, thinking, and problem solving as well as the tactics that facilitate better learning, thinking, and problem solving.

Research, Measurement and Evaluation

Electives are selected in consultation with the advisor to reflect the student's concentration. In the Research, Measurement and Evaluation emphasis the student is prepared to conduct research, measurement and evaluation functions in a variety of educational settings such as the school district, social agencies or business organizations.

Human Development

Electives are selected in consultation with the advisor to reflect the student's concentration. Human Development emphasis provides the students with a foundation of the principles of human development that will enable them to function as consultants in applied developmental settings such as day-care facilities, youth centers or other social agencies.

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 courses specified here.....	43
Complete program electives specified here	5-6
Concentration area requirements.....	15-18

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 held each semester (including summer) following mid-term exams. All complete applications received by mid-term 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.

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 64-65 hours to graduate.

Required Courses — 43 semester hours

<i>Learning and Cognitive Processes</i>	
EPRE 681 Learning & Cognitive Processes.....	3
EPRE 682 Cognition and Instruction	3
<i>Human Development</i>	
EPRE 630 Child and Adolescent Psychology.....	3
EPRE 631 The Psychology of Youth, Adulthood & Aging	3
<i>Research, Statistics and Measurement</i>	
EPRE 603 Analysis of Variance.....	3
EPRE 610 Statistical Packages for Educational Research	3
EPRE 700 Advanced Research Methods	3
STAT 605 Multivariate Analysis I.....	3
or	
STAT 606 Multiple Linear Regression Models.....	3
<i>Professional Development</i>	
EPRE 661 Professional Issues in Educational Psychology/Technology	1
EPRE 663 Apprenticeship	2
<i>Dissertation</i>	
EPRE 797 Doctoral Proposal Research	4
EPRE 799 Doctoral Dissertation	12

The student will take required courses in one of the following emphasis areas:

<i>Learning and Cognitive Processes</i>	
EPRE 635 Individual Differences in Cognition.....	3
EPRE 685 Advanced Seminar in Learning and Cognition (taken twice).....	6
PSY 624 Human Neuropsychology	3
<i>Take two of the following:</i>	
EPRE 615 Seminar in Applied Behavioral Analysis.....	3

EPRE 654 Seminar in College Teaching.....	3
EPRE 694 Practicum	3-9
PSY 590 Seminar in History and Systems.....	3

Human Development

EPRE 684 Advanced Seminar in Human Development	3
EPRE 694 Practicum	3-9
PSY 482 Behavioral Genetics.....	3
SOC 610 Seminar in Social Psychology.....	3

Take two of the following:

EDEC 539 Issues in Parent-Teacher-Child Relationships	3
EPRE 654 Seminar in College Teaching	3
GERO 625 Issues & Concepts in Gerontology	4
PPSY 675 Intelligence Assessment	3
PPSY 758 Advanced Psychopathology.....	3
Note — PSY 482 must be taken over and above the number of hours required for the doctoral program.	

Research, Statistics and Measurement

EPRE 671 Evaluation: Advanced Methods.....	3
EPRE 675 Measurement II: Advanced Techniques	3
EPRE 686 Advanced Seminar in Measurement & Evaluation.....	3

Take one of the following:

STAT 605 Multivariate Analysis I.....	3
STAT 606 Multiple Linear Regression Models.....	3
STAT 615 Multivariate Analysis II.....	3

Take two of the following:

EPRE 615 Seminar in Applied Behavior Analysis.....	3
EPRE 654 Seminar in College Teaching.....	3
EPRE 680 Qualitative Research Methods	3
EPRE 692 Internship in Educational Psychology, Research, and Evaluation	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

Elective Courses — 5-6 semester hours

Electives are selected in consultation with the advisor.

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 course work 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 examinations. Written exams are administered twice a year during fall and spring semesters. Specific procedures on comprehensives, the research tool requirement, and admissions criteria are available from the program secretary.

Educational Specialist in School Psychology

Program Requirements

Complete the required courses specified here.....74-77

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 certification requirements for school psychologists. Training is primarily oriented toward the acquisition of those skills necessary for effective functioning as school psychologists.

Admission

In addition to the admission requirements of the Graduate School, the student must submit the following data to the Professional Psychology office by March 1. Decisions will be announced by March 31. The master's degree is *not* required for admission.

- Academic transcripts of all college or university training. A grade point average of at least 2.70 in the last 100 hours of academic work is preferred (sent to the Graduate School by March 1).
- 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 future career goals of the applicant. This statement should be forwarded to the coordinator of school psychology.

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 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 certification requirements, complete the program, and prepare the student to be a professional school psychologist.

Required Courses — 74-77 semester hours

* Recommended to meet State of Colorado School Psychologist certification requirements.

Psychological Foundations

PPSY 763 Seminar in School Psychology	2
*PPSY 610 Theories of Personality	2
*EPRE 630 Childhood and Adolescence.....	3
*PPSY 607 Theories of Counseling.....	2
EPRE 540 Theories and Principles of Learning	3
or	
*PPSY 638 Behavioral Applications to Professional Psychology	3
*PPSY 660 Systems Analysis and Consultation Theory	2

*PPSY 655 Community Psychology and Social Systems	3
*PPSY 657 Legal/Ethical Aspects of Psychology	3
*PPSY 781 Evaluation of Psychological Services	3
<i>Assessment and Intervention</i>	
*PPSY 612 Practicum in Individual Counseling.....	4
or	
*PPSY 615 Counseling Practicum: School	3
PPSY 659 Group Laboratory Experience: Agency	1
*PPSY 662 Group Dynamics and Facilitation.....	2
*PPSY 674 Intellectual and Cognitive Assessment	5
PPSY 678 Practicum in Personality and Clinical Assessment	5
<i>*Choose three of the following:</i>	
PPSY 617 Play Therapy: Theory and Practicum	3
PPSY 618 Practicum in Behavior Modification	3
PPSY 665 Family Systems	2
PPSY 681 Systems Intervention Practicum	3
PPSY 694 Practicum in Family Therapy	4
<i>Professional Education</i>	
*EDRD 617 Evaluation and Correction of Individual Reading Problems	4
PPSY 569 Violence Against Women and Children.....	2
PPSY 580 Computer Applications to Professional Psychology	2
*PPSY 647 Psychological Aspects of Learning Disabilities.....	2
Note — And/or other courses, with advisor approval, from EDAD, EDSE, or EDF to meet state of Colorado certification standards.	
<i>*Minority Understanding</i>	
<i>Choose one of the following:</i>	
PPSY 565 Psychology of Prejudice.....	2
PPSY 568 Psychology of Women	2
PPSY 623 Understanding and Counseling Minorities	2
<i>Supervised Field Work</i>	
*PPSY 789 Internship in School Psychology	12

Elective Courses

PPSY 779 Practicum in School Psychology	3
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School Psychologist Certification

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 seeking initial Colorado endorsement for a Type E certificate (School Psychology) should contact the Teacher Education Center in McKee Hall for state proficiency examination requirements.

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

Near the end of the semester that the certification program is to be completed, the candidate should complete application forms in the Teacher Education Center. 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 courses specified here..... 117-126

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 psychologist who, in addition to possessing general practitioner skills, has developed proficiency in the areas of administration, advanced consultation and systems change, research and evaluation. Doctoral graduates, in addition to being eligible for certification as school psychologists, may also be qualified to assume positions as administrators, therapists, university professors, educational evaluators and private consultants.

Doctoral students in School Psychology are required to engage in research with a graduate professional psychology faculty member for five hours per week (equivalent, one semester hour) for a minimum of two semesters.

Admission

In addition to the admission requirements of the Graduate School, the student must submit the following data to the Professional Psychology office by March 1. Decisions announced by March 31. The Master's degree is *not* required for admission.

- Academic transcripts of all college or university training. A grade point average of 3.0 in the last 90 hours of academic work is preferred.
- Scores on the verbal and quantitative sections of the Graduate Record Examination. (Transcripts and GRE scores must be sent to the Graduate School before March 1.)
- 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 future career goals of the applicant. This statement should be forwarded to the coordinator of school psychology.

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's 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 to meet certification and/or licensure requirements, complete the program, and prepare to be a professional school psychologist.

Required Courses — 117-126 semester hours

* Recommended to meet State of Colorado School Psychologist certification requirements.

<i>Psychological Foundations</i>	
PPSY 763 Seminar in School Psychology	2
*PPSY 610 Theories of Personality	2
*EPRE 630 Childhood and Adolescence	3
*PPSY 607 Theories of Counseling.....	2
or	
*PPSY 707 Seminar in Personality and Counseling Theories	3
PPSY 758 Advanced Psychopathology.....	3
*PPSY 655 Community Psychology and Social Systems	3
*PPSY 660 Systems Analysis and Consultation Theories	2
*PPSY 657 Legal/Ethical Aspects of Psychology	3
*PPSY 670 Psychological Testing and Measurement.....	3
EPRE 540 Theories and Principles of Learning	3
or	
*PPSY 638 Behavioral Applications to Professional Psychology	3
PPSY 590 Seminar in History and Systems	3
PPSY 624 Human Neuropsychology	3
or	
PPSY 625 Advanced Neuropsychology	4
<i>Assessment and Intervention</i>	
*PPSY 674 Intellectual and Cognitive Assessment	5
PPSY 678 Practicum in Personality and Clinical Assessment	5

*PPSY 612 Practicum in Individual Counseling.....	4
or	
*PPSY 702 Practicum in Counseling.....	2
PPSY 659 Group Laboratory Experience: Agency	1
*PPSY 662 Group Dynamics and Facilitation	2
PPSY 775 Supervision of Psychological Testing	3
<i>*Choose any two of the following:</i>	
PPSY 617 Play Therapy: Theory and Practicum	3
PPSY 618 Practicum in Behavior Modification	3
PPSY 681 Systems Intervention Practicum	3
PPSY 694 Practicum in Family Therapy	4
PPSY 626 Introduction to Neuropsychological Assessment	4
<i>*Minority Understanding</i>	
<i>Choose any one of the following:</i>	
PPSY 565 Psychology of Prejudice.....	2
PPSY 658 Psychology of Women	2
PPSY 623 Understanding and Counseling Minorities	2
<i>Research</i>	
EPRE 700 Introduction to Doctoral Research	3
PPSY 797 Doctoral Proposal Research	4
PPSY 799 Doctoral Dissertation	12
<i>Research Tools</i>	
<i>Applied Statistics</i>	
*EPRE 602 Elements of Statistics.....	3
and	
EPRE 603 Analysis of Variance.....	3
or	
STAT 501 Statistical Methods I	4
and	
STAT 502 Statistical Methods II	4
STAT 605 Multivariate Analysis.....	3
or	
STAT 606 Multiple Linear Regression Models.....	3
<i>Applied Research</i>	
PPSY 580 Computer Applications to Psychology	2
or	
EPRE 610 Statistical Packages for Educational Research	3
EPRE 675 Measurement II: Advanced Techniques	3
PPSY 663 Research Apprenticeship: School Psychology.....	2
PPSY 781 Evaluation of Psychological Services.....	3
<i>Supervised Field Work</i>	
*PPSY 789 Internship in School Psychology (2 semesters)	12
<i>* Professional Education (Minimum, 9 hours)</i>	
*PPSY 647 Psychological Aspects of Learning Disabilities.....	2
PPSY 569 Violence Against Women and Children.....	2
*EDRD 617 Evaluation and Correction of Individual Reading Problems	4
Electives in Professional Education.....	1
Note — With Advisor approval, and/or other courses from EDAD, EDF, or EDSE, to meet State of Colorado Certification Standards.	

Elective Courses

If additional hours are needed, students may choose courses in consultation with their advisors.

School Psychologist Certification

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 seeking initial Colorado endorsement for a Type E certificate (School Psychology) should contact the Teacher Education Center in McKee Hall for state proficiency examination requirements.

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

Near the end of the semester that the certification program is to be completed, the candidate should complete application forms in the Teacher Education Center. 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 Administration

Emphasis in Elementary/Secondary

Program Requirements

Complete the required courses specified here.....	24
Complete the program electives specified here.....	6

Admission

In addition to the admission requirements of the Graduate School, the applicant must present supervisory ratings on dimensions of leadership (on forms available from the program unit), self-ratings, resumes, a written statement of goals and purposes in seeking admission, and must complete a satisfactory interview with the admissions committee of the program unit. For applicants who live more than 40 miles from Greeley, telephone interviews may be arranged. Admissions decisions are made during the last two weeks of each semester or term.

Required Courses — 24 semester hours

EDAD 525 Governance of American Education.....	3
EDAD 610 School Finance and Budgeting.....	3
EDAD 620 Law and the Administrator.....	3
EDAD 630 Planning and Change in Education.....	3
EDAD 650 School Personnel Administration.....	2
EDAD 670 The School Principalship.....	3
EDF 662 Foundations of Curriculum Development and Instructional Practice.....	4
EPRE 600 Introduction to Graduate Research.....	3

Elective Courses — 6 semester hours

Program requires a total of at least 30 semester hours beyond the B.A.

Note

Satisfactory performance on a written comprehensive examination in accordance with Graduate School policy and official written policies of the program unit.

Master of Arts in Educational Administration

Emphasis in Community College

Program Requirements

Complete the required courses specified here.....	23
Complete program electives specified here.....	7

Admission

In addition to the admission requirements of the Graduate School, the applicant must present supervisory ratings on dimensions of leadership (on forms available from the program unit), self-ratings, resumes, a written statement of goals and purposes in seeking admission, and must complete a satisfactory interview with the admissions committee of the program unit. For applicants who live more than 40 miles from Greeley, telephone interviews may be arranged. Admissions decisions are made during the last two weeks of each semester or term.

Required Courses — 23 semester hours

CSPA 656 Student Services in the Community College.....	2
EDAD 621 Law and Higher Education.....	3
EDAD 625 Organization and Administration of the Community College.....	3
EDAD 653 College and University Curriculum.....	3
EDAD 654 Personnel Management in Higher Education.....	3
EDAD 655 Finance and Resource Management in Higher Education.....	3
EDAD 680 Internship in Educational Administration (Community College Administrator).....	3
EPRE 600 Introduction to Graduate Research.....	3

Elective Courses — 7 semester hours

Recommended Electives

EDAD 510 Developing Grants and Contracts.....	2
EDAD 630 Planning and Change in Education.....	3
EDAD 632 Supervision and Evaluation.....	3
EDAD 641 Seminar on Decision Theory.....	3
EDAD 642 Seminar on Communication and Community Relations.....	3
Note — Electives to total at least 30 semester hours beyond the B.A.	

Note

Satisfactory performance on a written comprehensive examination in accordance with Graduate School policy and official written policies of the program unit.

Doctor of Education in Educational Administration

Emphasis in Administration of Community Colleges

Program Requirements

Complete the required courses specified here.....46
 Complete program electives to total at least 64 semester hours
 beyond the M.A. or at least 94 semester hours beyond the B.A.

Admission

In addition to the admission requirements of the Graduate School, the applicant must present supervisory ratings on dimensions of leadership (on forms available from the program unit), self-ratings, resumes, written statement of goals and purposes in seeking admission, and must complete a satisfactory interview with the admissions committee of the program unit. For applicants who live more than 40 miles from Greeley, telephone interviews may be arranged. Admissions decisions are made during the last two weeks of each semester or term.

Required Courses — 46 semester hours

Completion of specific course requirements of M.A. in Educational Administration: Community College

EDAD 641 Seminar on Decision Theory	3
EDAD 642 Seminar on Communication and Community Relations	3
EDAD 744 Seminar on Organization and Administrative Theory	3
EDAD 745 Seminar on Executive Leadership.....	3
EDAD 652 History of Higher Education in the U.S.....	2

EDAD 633 Policy Analysis and Development	3
EDAD 680 Internship in Educational Administration.....	2
<i>Community College Administrator or Community Agency</i>	
EDAD 690 Practicum on Management of Change	2
EDAD 797 Doctoral Proposal Research	4
EDAD 799 Doctoral Dissertation	12
EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
<i>or</i>	
EPRE 670 Evaluation: Models and Design	3
EPRE 700 Advanced Research Methods	3

Recommended Electives

EDAD 510 Developing Grants and Contracts	2
EDAD 651 Conflict Management in Education	3
EDAD 630 Planning and Change in Education	3

Note

Satisfactory performance on written and oral comprehensive examinations in accordance with Graduate School policy and official written policies of the program unit.

Doctor of Education in Educational Administration

Emphasis in Administration of Higher Education

Program Requirements

Complete the required courses specified here.....59
 Complete program electives to total at least 64 semester hours
 beyond the M.A. or at least 94 semester hours beyond the B.A.

Admission

In addition to meeting Graduate School admission requirements, applicants must present supervisory ratings on dimensions of leadership (on forms available from the program unit), self-ratings, resumes, a written statement of goals and purposes in seeking admission, and must complete a satisfactory interview with the admissions committee of the program unit. For applicants who live more than 40 miles from Greeley, telephone interviews may be arranged. Admissions decisions are made during the last two weeks of each semester or term.

Required Courses — 59 semester hours

EDAD 621 Law and Higher Education.....	3
EDAD 633 Policy Analysis and Development	3
EDAD 641 Seminar on Decision Theory	3
EDAD 642 Seminar on Communication and Community Relations	3
EDAD 652 History of Higher Education in the U.S.....	2
EDAD 653 College and University Curriculum	3
EDAD 654 Personnel Management in Higher Education	3

EDAD 655 Finance and Resource Management in Higher Education	3
EDAD 651 Conflict Management in Education	3
EDAD 680 Internship in Educational Administration.....	2
<i>University Administration</i>	
EDAD 744 Seminar on Organization and Administrative Theory	3
EDAD 745 Seminar on Executive Leadership.....	3
EDAD 797 Doctoral Proposal Research	4
EDAD 799 Doctoral Dissertation	12
EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
<i>or</i>	
EPRE 670 Evaluation: Models and Design	3
EPRE 700 Advanced Research Methods	3

Elective Courses

Electives to total at least 64 semester hours beyond the M.A. or 94 semester hours beyond the B.A.

Note

Satisfactory performance on written and oral comprehensive examinations in accordance with Graduate School policy and official written policies of the program unit.

Doctor of Education in Interdisciplinary Studies: Educational Technology

Program Requirements

Complete the required courses specified here.....43
 Complete program electives (approved in plan of study).....21

The Doctor of Education degree in Interdisciplinary Studies: Educational Technology is designed to provide students with advanced opportunities to develop knowledge and skills in the area of instructional delivery system design. Development and evaluation includes an emphasis on Instructional Computing as well as Media Systems. All students enrolled in the Ed.D. program must complete the required courses noted below, or have equivalent courses approved for substitution by their program advisor.

Admission

Admission to the Ed.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 held each semester (including summer) following mid-term exams. All complete applications received by mid-term 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 GRE scores (forwarded from the Graduate School), a description of previous teaching or educationally-related work experience, transcripts from previous undergraduate and graduate work, three letters of recommendation from immediate supervisors or professors, and a written statement on the relationship of the doctoral program to future career goals. A personal interview may be required at the option of the program faculty.

Minimum criteria for acceptance include:

- GRE combined score of 1650 on the verbal, quantitative and analytical sections with no section falling below 450. The GRE must have been taken within the last five years.
- Educationally-related work experience is desirable.
- A 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 goals of the doctoral program.

Required Courses — 43 semester hours

EPRE 603 Analysis of Variance.....	3
EPRE 610 Statistical Packages.....	3
EPRE 682 Cognition and Instruction.....	3
EPRE 700 Advanced Research Methods.....	3
ET 524 Authoring Systems	
<i>or</i>	
ET 625 Programming Languages for Educational Applications.....	3
ET 602 Instructional Analysis, Design and Evaluation.....	3
ET 613 Instructional Telecommunications.....	3
ET 627 Computer Assisted/Managed Instruction.....	3
ET 692 Internship.....	3
<i>or</i>	
ET 693 Practicum.....	3-8
<i>or</i>	
EPRE 663 Apprenticeship.....	8
ET 797 Proposal Seminar.....	4
ET 799 Dissertation.....	12

Elective Courses — 21 semester hours

Elective courses are to be selected to meet prerequisite requirements and to develop or support a student's teaching or research interests.

Master of Arts in Elementary Education

Program Requirements

Complete the required courses specified here.....	21
Complete program electives specified here	9

The Master of Arts Degree in Elementary Education prepares a certified 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 Division of Educational Studies 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 Courses — 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 — EDEL 601, EDRD 612 must be taken and completed at UNC.	

Elective Courses — 6 semester hours

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
Note — 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., sciences, 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.

Note

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

Master of Arts in Elementary Education Emphasis in Middle School

Program Requirements

Complete the required courses specified here.....	21
Complete program electives 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 certified teachers who wish to pursue graduate work that focuses on the middle level education. Because current certification standards allow elementary, middle school, and secondary certified teachers to teach at this level, the program is open to all certified teachers interested in middle school teaching. Students completing this program will not automatically receive middle school certification. They may obtain middle school certification by completing the Post Baccalaureate Certification Program concurrently with their master's program. Students must have a teaching certificate before completing the master's program.

Required Courses — 21 semester hours

<i>Middle School Education Core</i>	
EDEL 619 Pluralism in Education	3
EDEL 679 Research Applications for Appraisal, Evaluation, and Clinical Supervision of Teaching in Elementary and Middle Schools	3
EDMS 601 Practicum	3
EDMS 667 Assessment, Design, and Evaluation of Elementary and Middle School Curriculum	3
EPRE 600 Introduction to Graduate Research	3
EPRE 631 Adolescent Psychology	3
Note — The practicum is designed as a culminating experience for the degree program. It may serve as a replacement for the written comprehensive examination. There will be an oral defense of the practicum project if it is used as a replacement to the written comprehensive examination.	
<i>Reading</i>	
EDRD 521 Critical Reading and Thinking in Content Subjects	3
or	
EDRD 620 Reading in the Middle and the Secondary School.....	3
Note — The student will choose one of the above.	

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.

Master of Arts in Elementary Education: Early Childhood Education

Emphasis in Early Childhood/Primary Education

Program Requirements

Complete the required courses specified here.....26-27
 Complete program electives specified here 3-4

Prerequisites

Students who are not certified in elementary education must have their transcript evaluated by the College of Education and by the Division of Educational Studies. This program does not lead to initial certification. Certification in elementary education is not a prerequisite for students for whom one or more of the following conditions applies: (a) the student plans to work only with preschool-age children or otherwise work in settings that elementary certification is not required; (b) the student is certified K-2 or K-3 or some other designation embracing a certification that covers a similar portion of the current K-6 Colorado certification; or (c) the student is a foreign student and plans to return to a situation separate from any direct association with U.S. schools.

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.

Required Courses — 26-27 semester hours

<i>Core Courses — 18 semester hours</i>	
EDEC 660 Critical Issues in Early Childhood.....	3
EDEC 662 Research and Teaching in Early Childhood and Primary Education.....	3
EDEC 664 Seminar in Early Childhood and Primary Education.....	3
EDEC 675 Play and Psychosocial Development in Early Childhood	3
EDEL 619 Pluralism in Education	3
EPRE 600 Introduction to Graduate Research	3

Choose a minimum of three courses (8-9 hours) from the following:

EDEC 539 Issues in Parent-Teacher-Child Relationships	3
EDEC 648 Psycholinguistics in Early Childhood	2
EDEC 663 Educational Assessment, Evaluation, and Prescription for the Young Child.....	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
EDRD 612 Reading in the Elementary School.....	3
EDRD 614 Literature for Children, Adolescents, and Young Adults	3
EDRD 617 Evaluation and Improvement of Reading and Related Abilities.....	3
SCED 671 Science Curriculum in the Elementary School	2

Elective Courses — 3-4 semester hours

EDEC 508 Early Childhood Workshop.....	3
EDEC 667 Cultural Diversity in Early Childhood.....	3
EDEL 679 Researched Applications in Appraisal, Evaluation, and Clinical Supervision of Teaching in the Elementary and Middle School	3
Note — Additional courses may be taken from the above electives to earn a minimum of 30 semester hours.	

Note

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.

Doctor of Education in Elementary Education

Program Requirements

Complete the required courses specified here.....46-48
 Complete program electives specified here21

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 College of Education and Division of Educational Studies, in addition to the Graduate School, in order to determine admissibility. Applicants must be certified 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 Courses — 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 — 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 Courses — 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 — A minimum of 15 semester hours must be selected in consultation with the advisor.

Elective Courses — 21 semester hours

There are two categories of elective course work, general and external. Students must complete a minimum of 21 hours of elective course work from one or both categories. Most students choose to balance their elective course work 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 Seminar in Reading Research: Theory, Practice, and Issues	3

*Note — 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.)

Master of Arts in Reading

Program Requirements

Complete the required courses specified here.....	21
Complete program electives specified here	9

The Master of Arts degree programs in Reading prepare a student to function more effectively as an elementary or secondary classroom teacher or to fulfill requirements for institutional recommendation for endorsement as an Elementary Reading Teacher or a Secondary Reading Teacher. 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 equivalent certificate before such recommendation will be made. Supervised practicum experiences and research are arranged by the Reading Center.

Reading Elementary

A student whose undergraduate major was not in elementary education must have evaluations by the College of Education and by the Division of Educational Studies. 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 33).

Required Reading Courses, Elementary — 18 semester hours

EDRD 612 Reading in the Elementary School.....	3
EDRD 614 Literature for Children, Adolescents, and Young Adults	3
EDRD 617 Evaluation and Improvement of Reading and Related Abilities.....	3
EDRD 645 Seminar in Reading Research: Theory, Practice, and Issues	3
EDRD 672 Teaching Reading in a Pluralistic Society.....	2
EDRD 692 Clinical Practicum and Internship: Elementary	4
Note — EDRD 612, EDRD 617, EDRD 645, and EDRD 692 must be taken at UNC. EDRD 645 is a course substitute for EPRE 600: Introduction to Graduate Research.	

A minimum of three additional reading hours to be selected from the following:

EDRD 508 Reading Workshop	1-10
EDRD 515 Current Trends and Issues in Reading/Language Education	3
EDRD 601 Practicum in Reading.....	1-3
EDRD 620 Reading in the Middle and Secondary School.....	3
EDRD 694 Reading Center Internship: College Reading, Literacy, Supervision (maximum of 6 hours)	2

Elective Courses outside of Reading — 9 semester hours

In consultation with advisor, select at least 9 semester hour courses in Special Education and Educational Psychology for an emphasis in remedial reading or in English and Speech Communication courses for an emphasis in developmental reading.

Reading Secondary

A student who does not hold certification as a secondary school teacher must have evaluations by the College of Education and by the Division of Educational Studies. 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 33.)

Required Reading Courses, Secondary — 19 semester hours

EDRD 521 Critical Reading and Thinking in Content Subjects	3
EDRD 614 Literature for Children, Adolescents, and Young Adults	3
EDRD 617 Evaluation and Improvement of Reading and Related Abilities.....	3
EDRD 620 Reading in the Middle and Secondary School.....	3
EDRD 645 Seminar in Reading Research: Theory, Practice, and Issues	3
EDRD 693 Clinical Practicum and Internship: Secondary	4
Note — EDRD 521, EDRD 617, EDRD 620, EDRD 645, and EDRD 693 must be taken at UNC.	

A minimum of two additional reading hours to be selected from the following:

EDRD 508 Reading Workshop	1-10
EDRD 516 Teaching Reading to the Gifted Reader	2
EDRD 601 Practicum	1-3
EDRD 672 Teaching Reading in a Pluralistic Society.....	2
EDRD 694 Reading Center Internship: College Reading, Literacy, Supervision (maximum of 6 hours)	2

Elective Courses outside of Reading — 9 semester hours

In consultation with advisor, select at least 9 semester hours in Special Education and Educational Psychology for an emphasis in remedial reading or in English and Speech Communication courses for an emphasis in developmental reading.

Doctor of Education in Reading

Program Requirements

Complete the required courses specified here.....	48
Complete program electives specified here	16

Prerequisites

Students using this degree program to fulfill requirements for institutional recommendation for teacher certification endorsement as a Reading Specialist K-12 must provide evidence of two or more years of teaching experience in an accredited and/or established public school while holding a Type A or equivalent certificate before such recommendation will be made.

Students seeking a Reading Specialist K-12 endorsement and who hold an endorsement as Reading Teacher: Elementary or Reading Teacher: Secondary must secure endorsement at the alternate level by completing course requirements at the level alternate to the existing endorsement, and complete advanced student teaching or its equivalent, as required by the program coordinator, at the level alternate to the existing endorsement.

Students will be required to demonstrate appropriate literacy and competency in computer applications as part of this program (ET 503 is a recommended course).

Required Courses — 48 semester hours (in consultation with advisor)

EPRE 597 Special Topics: Qualitative Methods in Research and Evaluation	3
EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 674 Measurements: Educational Testing	3
EDRD 521 Critical Reading/Thinking in Content Subjects.....	3
EDRD 601 Practicum	1-3
EDRD 612 Reading in the Elementary School.....	3
EDRD 614 Literature for Children, Adolescents, and Young Adults	3
EDRD 617 Evaluation and Improvement of Reading and Related Abilities.....	3

EDRD 620 Reading in the Middle and Secondary School.....	3
EDRD 622 Directed Studies.....	1-3
EDRD 637 Reading at the College Level.....	2
EDRD 645 Seminar in Reading Research: Theory, Practice, and Issues	3
EDRD 672 Teaching Reading in a Pluralistic Society.....	2
EDRD 692 Clinical Practicum and Internship: Elementary	4
EDRD 693 Clinical Practicum and Internship: Secondary	4
EDRD 694 Reading Center Internship: College Reading, Literacy, Supervision (maximum of 6 hours).....	2
EDRD 712 Psychology of Reading.....	3
EDRD 745 Topical Seminar in Reading	2-4
EDRD 750 The Contributing Professional in Reading.....	2-4
EDRD 795 Supervised Practicum in College Teaching (repeat to a maximum of 9 hours)	3
EDRD 797 Doctoral Proposal Research.....	4
EDRD 799 Doctoral Dissertation	12

Note — EPRE 602 is required and is to be taken concurrently with the required course, EDEL 710. EPRE 603 is also required and must be taken concurrently with the required course, EDEL 711. The student should select 48 semester hours from the above in consultation with advisor.

Elective Courses — 16 semester hours

In consultation with advisor, select 16 semester hours in support areas in English, Educational Psychology, Speech Communication, and Special Education.

Note

Supervised practicum experiences and research are facilitated by the Reading Center. The Doctor of Education program in Reading is based upon certification to teach in the elementary or secondary school and upon completion of 6 semester hours of educational psychology.

Master of Arts in Special Education

Emphasis in Early Childhood Special Education

Program Requirements

Complete the required courses specified here.....39-48

Admission

In addition to 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 certification, she or he is required to complete 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 Courses — 39-48 semester hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education	3
EDSE 501 Learning and Development in Exceptional Individuals	3
EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual	3
EDSE 503 Assessment of Exceptional Individuals	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 Communication and Language for Early Childhood Special Education	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
<i>Graduate Study</i>	
EPRE 600 Introduction to Graduate Research	3
<i>Practicum</i>	
EDSE 535 Practicum in Early Childhood Special Education	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 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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher IV Early Childhood Special Education. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification examination. However, a minimum of 15 semester hours must be taken at UNC.

Master of Arts in Special Education

Emphasis in Moderate Needs

Program Requirements

Complete the required courses specified here.....30-36
Complete the elective courses specified.....3

Admission

In addition to 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.

To be endorsed as a Special Education teacher of students with moderate needs, the applicant shall also: (a) hold or be eligible for a Type A or B Certificate endorsed Early Childhood Education, Elementary Education, or Secondary Education; (b) have completed a bachelor's degree from an accredited institution of higher education; (c) have completed one year teaching experience or equivalency.

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 certification, she or he is required to complete 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 Courses — 30-36 semester hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education	3
EDSE 501 Learning and Development in Exceptional Individuals	3
EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual	3
EDSE 503 Assessment of Exceptional Individuals	3

Special Education Moderate Needs

EDSE 600 Consultation Skills for Special Educators	3
EDSE 601 Instructional Methods for the Moderately Handicapped	3
EDSE 602 Classroom management.....	3
<i>Graduate Study</i>	
EPRE 600 Introduction to Graduate Research	3
<i>Practicum with Students with Moderate Needs</i>	
EDSE 603 Practicum with Moderately Handicapped Students.....	6-12

Elective Courses — 3 semester hours

EDRD 617 Evaluation and Improvement of Reading and Related Abilities.....	3
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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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher I Moderate Needs. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification 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 prerequisite courses specified here3
 Complete the required courses specified here.....41-47

Admission

In addition to 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 certification, she or he is required to complete course requirements listed under Professional Teacher Education. The program consists of the required courses and practicum requirements agreed upon by the student and advisor.

Prerequisites — 3 semester hours

EDSE 401 Parents of Children with Profound Needs 3

Required Courses — 41-47 semester hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education 3
 EDSE 501 Learning and Development in Exceptional Individuals 3
 EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual 3
 EDSE 503 Assessment of Exceptional Individuals 3

Profound Needs

EDSE 520 Survey of Learners with Profound Needs 3
 EDSE 521 Assessment of Learners with Profound Needs 3
 EDSE 522 Methods of Teaching Learners with Profound Needs, Birth to 8 Years 4
 EDSE 523 Methods of Teaching Learners with Profound Needs, 9 to Adult 4
 EDSE 524 Seminar in Education of Learners with Profound Needs 3
 EDSE 525 Research and Policy for Learners with Profound Needs 3
Graduate Study
 EPRE 600 Introduction to Graduate Research 3
Practicum
 EDSE 526 Practicum with the Severely/Profoundly Handicapped 6-12

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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher III Profound Needs. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification 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 courses specified here.....36-45

Admission

In addition to 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 certification, she or he is required to complete 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 Courses — 36-45 semester hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education 3
 EDSE 501 Learning and Development in Exceptional Individuals 3
 EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual 3
 EDSE 503 Assessment of Exceptional Individuals 3
Behaviorally Disordered
 EDSE 606 Methods of Teaching Severe Communication, Affective and Cognitive Needs Students 3
 EDSE 607 Functional Curriculum and Community Based Instruction 3

EDSE 608 Case Studies in Severe Affective, Communication and Cognitive Needs 3
 EDSE 609 Language Disorders of Students with Severe Affective, Cognitive and Communication Needs 3
 EDSE 610 Interventions for Students with Severe Affective Needs 3
 EDSE 611 Seminar in Severe Affective Needs 3
Graduate Study
 EPRE 600 Introduction to Graduate Research 3
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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Affective. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification examination. However, a minimum of 15 semester hours must be taken at UNC.

Master of Arts in Special Education

Emphasis in Severe Needs: Cognitive

Program Requirements

Complete the required courses specified here.....39-45

Admission

In addition to 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 certification, she or he is required to complete 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 Courses — 39-45 semester hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education	3
EDSE 501 Learning and Development in Exceptional Individuals	3
EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual	3
EDSE 503 Assessment of Exceptional Individuals	3
<i>Mental Retardation</i>	
EDSE 606 Methods of Teaching Severe Communication, Affective and Cognitive Needs Students	3
EDSE 607 Functional Curriculum and Communication Based Instruction ..	3
EDSE 608 Case Studies in Severe Affective, Communication and Cognitive Needs	3

EDSE 609 Language Disorders of Students with Severe Affective, Cognitive and Communication Needs.....	3
EDSE 620 Psycho-Social Aspects of Students with Severe Cognitive Needs	3
EDSE 621 Seminar in Severe Cognitive Needs	3
<i>Graduate Study</i>	
EPRE 600 Introduction to Graduate Research	3
<i>Practicum (6 hours minimum required)</i>	
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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Cognitive. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification examination. However, a minimum of 15 semester hours must be taken at UNC.

Master of Arts in Special Education

Emphasis in Severe Needs: Communication

Program Requirements

Complete the required courses specified here.....39-45

Admission

In addition to 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 certification, she or he is required to complete 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 Courses — 39-45 semester Hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education	3
EDSE 501 Learning and Development in Exceptional Individuals	3
EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual	3
EDSE 503 Assessment of Exceptional Individuals	3
<i>Learning Disabilities</i>	
CMDS 562 Language Characteristics of Exceptional Children	3
EDSE 606 Methods of Teaching Severe Communication, Affective and Cognitive Needs Students	3

EDSE 607 Functional Curriculum and Community Based Instruction	3
EDSE 608 Case Studies in Severe Affective, Communication and Cognitive Needs	3
EDSE 609 Language Disorders of Students with Severe Affective, Cognitive and Communication Needs.....	3
EDSE 630 Seminar in Severe Needs Communication	3
<i>Graduate Study</i>	
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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Communication. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification examination. However, a minimum of 15 semester hours must be taken at UNC.

Master of Arts in Special Education

Emphasis in Severe Needs: Hearing

Program Requirements

Complete the prerequisite courses specified here 13
 Complete the required courses specified here.....48-54

Admission

In addition to 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 certification, he or she is required to complete course requirements listed under Professional Teacher Education and obtain a teacher certificate in an area other than special education severe needs: hearing. This program meets the standards of the Colorado State Department of Education and the Council on Education of the Deaf.

Prerequisites — 13 semester hours

CMDS 370 Basic Audiology 4
 EDSE 350 Structure of Language 3
 EDSE 450 Introduction to Hearing Impaired 3
 EDSE 451 Basic Sign Language 3
 Note — Must be completed before graduation. CMDS 265 and CMDS 267 are prerequisites to CMDS 370.

Required Courses — 48-54 semester Hours

Special Education Core
 EDSE 500 Foundations and Communication in Special Education 3
 EDSE 501 Learning and Development in Exceptional Individuals 3
 EDSE 502 Educational Interventions for Meeting the Needs of the
 Exceptional Individual 3
 EDSE 503 Assessment of Exceptional Individuals 3

Severe Needs: Hearing

EDSE 600 Consultation Skills for Special Educators 3
 EDSE 650 Advanced Sign Language 3
 EDSE 651 Speech Science, Severe Needs: Hearing 3
 EDSE 652 Speechreading, Auditory Training and Amplification 3
 EDSE 653 Speech, Severe Needs: Hearing 3
 EDSE 654 Language, Severe Needs: Hearing 3
 EDSE 655 Reading, Severe Needs: Hearing 3
 EDSE 656 Methods of Teaching Content, Severe Needs: Hearing 3
 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) 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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Hearing. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification examination. However, a minimum of 15 semester hours must be taken at UNC.

Master of Arts in Special Education

Emphasis in Severe Needs: Vision

Program Requirements

Complete the required courses specified here.....41-53

Admission

In addition to 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 certification, she or he is required to complete 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 certification from a state other than Colorado may be required to take additional course work to meet Colorado Professional Teacher Education standards. Provided some prior course work has been completed in VH, students may complete certification and degree requirements in a minimum of 39 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 course work in VH has been completed. It is preferable for students to enroll fall semester.

Required Courses — 41-53 semester hours

Special Education Core

EDSE 500 Foundations and Communication in Special Education	3
EDSE 501 Learning and Development in Exceptional Individuals	3
EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual	3
EDSE 503 Assessment of Exceptional Individuals	3

Severe Needs Vision

EDEL 612 Elementary School Curriculum	3
EDSE 540 Independent Living for the Visually Handicapped	1-2
EDSE 542 Assessment and Methods for Teaching Multi-Impaired Visually Handicapped.....	4
EDSE 543 Braille Codes and Formats	1-2
EDSE 544 Technology in the Education of the Visually Handicapped	2
EDSE 546 Principles of Orientation and Mobility	2
EDSE 641 Visually Handicapped Medical and Educational Implications..	1-3
EDSE 642 Advanced Seminar in Education of Visually Handicapped	3
EDSE 643 Psychosocial Needs of Visually Handicapped	2
EDSE 718 Graduate Seminar in Education of Acoustically Handicapped/ Visually Handicapped	3

Graduate Study

EPRE 600 Introduction to Graduate Research	3
Practicum	

EDSE 644 Practicum in Education of Visually Handicapped, K-12	4-12
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Association for Education and Rehabilitation of Blind and Visually Impaired (AERBVI) Certification: Orientation and Mobility

EDSE 547 Independence in Orientation and Mobility	4
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EDSE 647 Applied Methods in Orientation and Mobility	2
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EDSE 648 Practicum in Orientation and Mobility	9
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Note — Students earning certification in O & M through AERBVI must complete the above course work in addition to the VH program requirements. Before enrolling in any mobility course work, students must obtain program faculty consent.

Association for Education and Rehabilitation of Blind and Visually Impaired (AERBVI) Certification: Rehabilitation Teaching

EDSE 549 Rehabilitative Teaching of the Visually Handicapped	3
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EDSE 646 Practicum in Rehabilitative Teaching of the Visually Handicapped, K-12	9
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Note — Students earning certification 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 certification program is required before the University of Northern Colorado will recommend the student for endorsement in Teacher II Severe Needs: Vision. Students entering the certification 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 course work, prior course work, or other departmentally approved documentation and completion of a certification examination. However, a minimum of 15 semester hours must be taken at UNC.

Master of Arts in Special Education

Emphasis in Teaching the Gifted and Talented

Program Requirements

Complete the required courses specified here.....32
 Complete program electives specified here 3-12

In addition to 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. However, if a student enters the master of arts program in special education without a current teacher certification, she or he is required to complete 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 Courses — 32 semester hours

Special Education Core

EDSE 500 Foundations and Communications in Special Education..... 3
 EDSE 501 Learning and Development in Exceptional Individuals 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

Practicum

EDSE 584 Practicum in Teaching the Gifted and Talented6-12
 Note — Minimum of 6 hours that are required during the Summer Enrichment Program. The maximum for the M.A. program is 12 hours.

Elective Courses — 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 course work, each student must pass a written comprehensive examination as well as an oral examination before she or he is allowed to graduate.

Students who possess a master's degree may be permitted to take required course work necessary for an endorsement in Colorado without a second master's degree program.

Doctor of Education in Special Education

Emphasis in Research

Program Requirements

Complete the required courses specified here.....	56
Complete program electives specified here	9

The Ed.D. in Special Education is a flexible doctoral program with provision for major emphases in university teaching, administration, or research. Major emphases are internally flexible and may be established to fit a variety of points of focus.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must receive a positive recommendation by the Division of Educational Studies Doctoral Review Committee. When a prospective student has met general University requirements for admission, his or her application is submitted to the Division of Educational Studies for evaluation. Additional information and materials that pertain to criteria established by the Division are required from the prospective student.

The Committee reviews each application for admission to determine evidence of 1) potential for scholarship, 2) relevant previous formal training at the undergraduate and/or graduate level, 3) evidence of successful teaching or clinical experience with exceptional children for a minimum of two years, 4) potential for leadership, professional commitment, clarity and rationality of professional and personal goals, 5) potential for conceptualization of and reporting research. Each applicant must receive a positive recommendation from a majority of the Doctoral Review Committee members to be recommended for admission to the Graduate School.

Each student, upon admission to the doctoral program, will be assigned an advisor. In consultation with this advisor, he or she should determine courses for the first semester on campus (usually required courses should be selected). During the first and second semesters on campus, the student and advisor in joint planning sessions should establish a tentative doctoral program. This program should be based on past experience and training and must include a statement of goals and rationale for proposed course work and educational experiences. Planning should provide for flexibility by future professional effort, but must have meaningful direction reflecting the rationale. The program, including rationale, must then be submitted to the doctoral program review board of the Division of Educational Studies for approval. If the board is concerned with elements of the plan, it will make recommendations for revisions or additions. Enrollment in third semester courses of the doctoral program without an approved program may lead to the inclusion of courses not ultimately approved as part of the doctoral plan.

Required Courses — 56 semester hours

Core Requirements

Note — Students will be required to demonstrate literacy and competency in computer applications as part of the program.

General Special Education Component

EDSE 710 Research Seminar in Special Education.....	3
EDSE 711 Trends in Special Education.....	3
EDSE 797 Doctoral Proposal Research	4
EDSE 799 Doctoral Dissertation (minimum).....	12

Quantitative Component

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 700 Advanced Research Methods	3
Note — One additional EPRE prefix course is required	

Requirements for Research Emphasis

STAT 604 Advanced Experimental Design	3
STAT 606 Multiple Linear Regression Model.....	3
EPRE 670 Evaluation: Models and Design	3
EPRE 671 Evaluation: Advanced Methods.....	3
EPRE 681 Learning and Cognitive Processes	3
EDSE 622 Directed Studies: Research	4
EDSE 712 Seminar in Professional Writing.....	3
EDSE 713 Internship in Special Education Administration.....	3

Elective Courses — 9 semester hours (minimum)

Three semester hours of EPRE prefix courses that have EPRE 602 and 603 as prerequisites.....	3
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Six semester hours (minimum) of the following EDSE courses:

EDSE 716 Advanced Seminar in Mental Retardation.....	3
EDSE 717 Advanced Seminar in Learning Disabilities	3
EDSE 718 Advanced Seminar in Education of Acoustically Handicapped/Visually Handicapped.....	3

Areas of Special Interest

The student will select an area of interest (one or more) in conference with his/her advisor, from the following areas: Emphasis in Vocational Preparation of Handicapped Children and Youth; Emphasis in Education of Preschool Handicapped Children; Emphasis in any of the categorical areas (Mental Retardation, Gifted, Learning Disabilities, Emotionally Disturbed, Visually Handicapped, Acoustically Handicapped, etc.); Emphasis in Education of Minority, Ethnic and Cultural Groups; Emphasis in Curriculum Development; Emphasis in Appraisal/Interpretational/Pupil Program Prescription; Emphasis in Institutional Programming and Management; Other area as designed by the student and his/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 research during the first semester of residency under the direction of a research advisor within the Special Education programs of the Division of Educational Studies. This independent research should continue during the student's program at the discretion of the research advisor.

Doctor of Education in Special Education

Emphasis in Special Education Administration

Program Requirements

Complete the required courses specified here.....	49
Complete program electives specified here	18

The Ed.D. in Special Education is a flexible doctoral program with provision for major emphases in university teaching, administration, or research. Major emphases are internally flexible and may be established to fit a variety of points of focus.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must receive a positive recommendation by the Division of Educational Studies Doctoral Review Committee. When a prospective student has met general University requirements for admission, his or her application is submitted to the Division of Educational Studies for evaluation. Additional information and materials that pertain to criteria established by the Division are required from the prospective student.

The Committee reviews each application for admission to determine evidence of 1) potential for scholarship, 2) relevant previous formal training at the undergraduate and/or graduate level, 3) evidence of successful teaching or clinical experience with exceptional children for a minimum of two years, 4) potential for leadership, professional commitment, clarity and rationality of professional and personal goals, 5) potential for conceptualization of and reporting research. Each applicant must receive a positive recommendation from a majority of the Doctoral Review Committee members to be recommended for admission to the Graduate School.

Each student, upon admission to the doctoral program, will be assigned an advisor. In consultation with this advisor, he or she should determine courses for the first semester on campus (usually required courses should be selected). During the first and second semesters on campus, the student and advisor in joint planning sessions should establish a tentative doctoral program. This program should be based on past experience and training and must include a statement of goals and rationale for proposed course work and educational experiences. Planning should provide for flexibility by future professional effort, but must have meaningful direction reflecting the rationale. The program, including rationale, must then be submitted to the doctoral program review board of the Division of Educational Studies for approval. If the board is concerned with elements of the plan, it will make recommendations for revisions or additions. Enrollment in third semester courses of the doctoral program without an approved program may lead to the inclusion of courses not ultimately approved as part of the doctoral plan.

Required Courses — 49 semester hours

Core Requirements

Note — Students will be required to demonstrate literacy and competency in computer applications as part of the program.

General Special Education Component

EDSE 710 Research Seminar in Special Education.....	3
EDSE 711 Trends in Special Education	3
EDSE 797 Doctoral Proposal Research	4
EDSE 799 Doctoral Dissertation (minimum).....	12

Quantitative Component

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 700 Advanced Research Methods	3
One additional EPRE prefix course is required.....	3

Requirements for Special Education Administration

EDAD 610 School Finance	3
EDAD 620 Law and the Administrator	4
EDSE 680 Administration and Supervision of Special Education.....	3
EDSE 681 Administrative Planning and Program Evaluation in Special Education	3
EDSE 713 Internship in Special Education Administration (8 hours recommended)	2-12

Elective Courses — 18 semester hours (minimum)

Three semester hours of EPRE prefix courses that have EPRE 602 and 603 as prerequisites.....	3
Three additional elective semester hours approved by the student's program committee.....	3
Six semester hours of advisor-approved course work in the area of educational administration.....	6

Six semester hours (minimum) of the following EDSE courses:

EDSE 716 Advanced Seminar in Mental Retardation.....	3
EDSE 717 Advanced Seminar in Learning Disabilities	3
EDSE 718 Advanced Seminar in Education of Acoustically Handicapped/Visually Handicapped	3

Areas of Special Interest

The student will select an area of interest (one or more) in conference with his/her advisor, from the following areas: Emphasis in Vocational Preparation of Handicapped Children and Youth; Emphasis in Education of Preschool Handicapped Children; Emphasis in any of the categorical areas (Mental Retardation, Gifted, Learning Disabilities, Emotionally Disturbed, Visually Handicapped, Acoustically Handicapped, etc.); Emphasis in Education of Minority, Ethnic and Cultural Groups; Emphasis in Curriculum Development; Emphasis in Appraisal/Interpretational/Pupil Program Prescription; Emphasis in Institutional Programming and Management; Other area 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 research during the first semester of residency under the direction of a research advisor within the Special Education programs of the Division of Educational Studies. This independent research should continue during the student's program at the discretion of the research advisor.

Doctor of Education in Special Education

Emphasis in University Teaching

Program Requirements

Complete the required courses specified here.....	43
Complete program electives specified here	21

The Ed.D. in Special Education is a flexible doctoral program with provision for major emphases in university teaching, administration, or research. Major emphases are internally flexible and may be established to fit a variety of points of focus.

Admission

In addition to meeting the admission requirements of the Graduate School, the student must receive a positive recommendation by the Division of Educational Studies Doctoral Review Committee. When a prospective student has met general University requirements for admission, his or her application is submitted to the Division of Educational Studies for evaluation. Additional information and materials that pertain to criteria established by the Division are required from the prospective student.

The Committee reviews each application for admission to determine evidence of 1) potential for scholarship, 2) relevant previous formal training at the undergraduate and/or graduate level, 3) evidence of successful teaching or clinical experience with exceptional children for a minimum of two years, 4) potential for leadership, professional commitment, clarity and rationality of professional and personal goals, 5) potential for conceptualization of and reporting research. Each applicant must receive a positive recommendation from a majority of the Doctoral Review Committee members to be recommended for admission to the Graduate School.

Each student, upon admission to the doctoral program, will be assigned an advisor. In consultation with this advisor, he or she should determine courses for the first semester on campus (usually required courses should be selected). During the first and second semesters on campus, the student and advisor in joint planning sessions should establish a tentative doctoral program. This program should be based on past experience and training and must include a statement of goals and rationale for proposed course work and educational experiences. Planning should provide for flexibility by future professional effort, but must have meaningful direction reflecting the rationale. The program, including rationale, must then be submitted to the doctoral program review board of the Division of Educational Studies for approval. If the board is concerned with elements of the plan, it will make recommendations for revisions or additions. Enrollment in third semester courses of the doctoral program without an approved program may lead to the inclusion of courses not ultimately approved as part of the doctoral plan.

Required Courses — 43 semester hours

Core Requirements

Note — Students will be required to demonstrate literacy and competency in computer applications as part of the program.

General Special Education Component

EDSE 710 Research Seminar in Special Education.....	3
EDSE 711 Trends in Special Education.....	3
EDSE 797 Doctoral Proposal Research	4
EDSE 799 Doctoral Dissertation (minimum).....	12

Quantitative Component

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
EPRE 700 Advanced Research Methods	3

Requirements for University Teaching Emphasis

EDSE 712 Seminar in Professional Writing.....	3
EDSE 713 Internship in Special Education Administration.....	3
EDSE 714 Supervised Practicum in College Teaching	3
ID 702 Teacher in the College Community (or approved substitute)	3

Elective Courses — 21 semester hours (minimum)

Three semester hours of EPRE prefix courses that have EPRE 602 and 603 as prerequisites.....	3
Twelve additional elective semester hours approved by the student's program committee.....	12

Six semester hours (minimum) of the following EDSE courses:

EDSE 716 Advanced Seminar in Mental Retardation.....	3
EDSE 717 Advanced Seminar in Learning Disabilities	3
EDSE 718 Advanced Seminar in Education of Acoustically Handicapped/Visually Handicapped	3

Areas of Special Interest

The student will select an area of interest (one or more) in conference with his/her advisor, from the following areas: Emphasis in Vocational Preparation of Handicapped Children and Youth; Emphasis in Education of Preschool Handicapped Children; Emphasis in any of the categorical areas (Mental Retardation, Gifted, Learning Disabilities, Emotionally Disturbed, Visually Handicapped, Acoustically Handicapped, etc.); Emphasis in Education of Minority, Ethnic and Cultural Groups; Emphasis in Curriculum Development; Emphasis in Appraisal/Interpretational/Pupil Program Prescription; Emphasis in Institutional Programming and Management; Other area 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 research during the first semester of residency under the direction of a research advisor within the Special Education programs of the Division of Educational Studies. This independent research should continue during the student's program at the discretion of the research advisor.

Post-Baccalaureate Certification in Elementary Education

Program Requirements

Complete the required courses specified here.....30-34

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.

Complete Professional Teacher Education, as outlined in this catalog.

Demonstrate appropriate literacy and competency in computer applications. ET 503 or the equivalent may be used to meet this requirement.

Required Courses — 30-34 semester hours

<i>Elementary Education</i>	
ART 344 Methods of Teaching Art in the Elementary School.....	1
or	
ART 644 Learning Experiences in Elementary Art Education.....	3
CH 303 Health Education in Elementary Education	1
or	
CH 504 Issues in Elementary School Health Education	3
EDF 201 Introduction to Multiculturalism.....	3
EDEL 500 Orientation to Certification in Elementary and Middle School, Reading, and Early Childhood Education.....	1
EDEL 505 Cadet Teaching.....	2
EDEL 520 Effective Instruction in Elementary School Mathematics	3
EDEL 540 Effective Instruction in the English/Language Arts in the Elementary School.....	3
EDEL 550 Effective Instruction in Elementary School Social Studies.....	3
EDEL 572 Seminar for Student Teachers.....	3
EDRD 510 Effective Instruction in Developmental Reading.....	3
Note — required by PTE	
EDRD 511 Elementary Reading Diagnosis and Individualization.....	3
MUS 206 Music Methods and Materials for Elementary Teachers.....	1
PE 288 Physical Education Activities for the Elementary School.....	1
SCED 570 Teaching Elementary Science.....	2
Note — EDEL 520, EDRD 510, EDEL 540, and EDEL 550 must be taken at UNC. Students may petition for course equivalence consideration for a maximum of two classes.	

Professional Teacher Education Requirements

Students applying for initial Colorado certification are required by the Colorado Department of Education to be prepared to meet educational standards. Required course work is specified under Professional Education requirements in this *Bulletin*.

A minimum of 12 credit hours in Elementary Teacher Education courses, including EDEL 500, EDEL 520, EDRD 510, and either EDLS 360, 361, or 362 must be completed before applying for student teaching.

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.

The 12 hours of student teaching, EDFE 444, must be in Elementary Education; that is, in Kindergarten or in grades one through six. EDEL 572, Student Teaching Seminar, must be taken during student teaching.

Please note that the PTE core program that accompanies Elementary Education Certification, described elsewhere in this *Bulletin*, involves the following substitutions:

- Delete EDRD 420, Reading in the Elementary School, substitute EDRD 510.
- EDSE 409, Handicapped Students in the Secondary Classroom, substitute EDSE 510.
- Specified equivalents to EDSE 408 may be used.

Recommended Electives

EDEL/EDEC/EDMS/EDRD 508 Early Childhood, Middle School, Reading, Elementary Education Workshops.....	1-10
EDEL 622 Directed Studies in Elementary Education	1-3

Electives

Other elective courses and workshops with EDEC, EDEL, EDMS, EDRD prefixes may be taken.

Note

Specific course advisement will be related to subject matter courses evaluated on individual student applicant baccalaureate degree or graduate transcripts of credit.

Post-Baccalaureate Certification Program in Middle School/Junior High

Program Requirements

Complete the required courses specified here.....18

Complete PTE program

Prerequisites

Completion of a baccalaureate degree in an area other than middle school. Demonstration of appropriate literacy and competency in computer application. Subject matter background must be shown in at least two content fields. These courses must be taken in accordance with one of the four options mentioned under the liberal arts requirements for the middle school undergraduate program.

Required Courses — 18 semester hours

<i>Middle School Education</i>	
EDMS 665 Middle School Theory, Philosophy, and Curriculum	3
EDMS 667 Assessment, Design and Evaluation of Elementary and Middle School Curriculum	3
EDRD 521 Critical Reading and Thinking in Content Subjects	3
PSY Elective in Adolescent Growth and Development	3
Appropriate methods classes in at least two content fields.....	6

Student Teaching

EDEL 572 Seminar for Student Teaching	3
EDFE 444 Student Teaching	12

Note — EDLS 362 and the requirements stated in the Graduate School Information section of this *Bulletin* must be completed before student teaching. Student teaching must be at the middle school or junior high level.

Note

Students applying for initial Colorado certification are required by the Colorado Department of Education to be prepared to meet educational standards. Required course work is specified under Professional Education requirements in this *Bulletin*. The Middle School program area evaluates required subject matter courses and middle school education courses.

Certification Program in Elementary Education

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	21
Complete a major with minimum hours	33-39
Complete PTE program	
Complete general electives to total a minimum of	120
Professional Teaching Requirement	18

Requirement for certification — complete a liberal arts major.

Required Courses — 21 semester hours

Elementary Education

ART 344 Methods of Teaching Art in the Elementary School.....	1
CH 303 Health Education in the Elementary School	1
EDEL 200 Orientation to Education.....	1
EDEL 405 Cadet Teaching.....	2
EDEL 420 Effective Instruction in Elementary School Mathematics	3
EDEL 440 Effective Instruction in Elementary School English/Language Arts	3
EDEL 450 Effective Instruction in Elementary School Social Studies.....	3
EDRD 411 Elementary Reading Diagnosis and Individualization.....	3
MUS 206 Music Methods and Materials for Elementary Teachers.....	1
PE 288 Physical Education Activities for the Elementary School.....	1
SCED 470 Teaching Science in the Elementary School.....	2
Note — EDEL 420, EDEL 440, EDRD 410, EDEL 450, and EDRD 411 must be taken at UNC. Students may petition for course equivalence consideration.	

The PTE core program that accompanies Elementary Education Certification, described elsewhere in this *Bulletin*, involves the following substitutions:

- Delete EDRD 420, Reading in the Secondary School, substitute EDRD 411;
- EDSE 409, Handicapped Students in the Secondary Classroom, substitute EDSE 408 or equivalents;
- The 12 hours of student teaching, EDFE 444, must be in Elementary Education — that is, in kindergarten or in grades one through six.
- A minimum of 12 credit hours in Elementary Teacher Education courses, including EDEL 200, EDEL 420, EDRD 411, EDRD 409, and either EDLS 360, 361, or 362 must be completed before applying for student teaching.

Recommended Electives

EDEL/EDEC/EDMS/EDRD 308 Elementary, Early Childhood, Middle School, Reading Education Workshops.....	1-10
EDEL 422 Directed Studies in Elementary Education	2
Note — Other elective courses and workshops with EDEC, EDEL, EDMS, EDRD prefixes may be taken.	

Professional Teaching Requirement

Students must contact the Teacher Education Center for applications before enrollment. These courses may be completed as a post-baccalaureate requirement.

EDF 201 Introduction to Multiculturalism.....	3
EDEL 472 Seminar for Student Teachers.....	3
EDFE 444 Student Teaching (minimum of 12 hours student teaching required)	12

Note

EDFE 472 must be taken concurrently with student teaching.

Certification Program in Middle School Education

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	19-20
Complete a major with minimum hours	39
Complete PTE program	
Complete general electives to total a minimum of	120

The Middle School Certification program is designed to prepare students to teach at this level (usually subset of grades 5-9). The students selecting this program will be assigned an advisor in Middle School Education.

Requirements for certification — Complete a liberal arts major that meets one of the following criteria: (a) Major with supporting field. (Supporting field consists of 18 hours of general education courses not in the major. These courses must represent a minimum of six hours in each of three of the following areas — social studies, language arts, mathematics, and science. Must be taken with consent of middle school advisor.) (57 hours); (b) double major (78 hours); or (c) major/minor (57 hours).

Required Courses — 19-20 semester hours

Middle School Education

EDEL 200 Orientation to Education.....	1
EDEL 472 Seminar for Student Teachers.....	3
EDMS 302 Orientation to Middle School.....	3
EDRD 412 Content Reading and Writing in the Elementary and Middle School.....	3

PSY 230 Human Growth and Development	4
or	
PSY 330 Child and Adolescent Psychology	3
Methods courses in both content major(s)/minor.....	6
Note — Methods classes are to be taken in appropriate content areas if a second major or minor is taken.	

Professional Teacher Education

Complete Professional Teacher Education course including the following:

EDF 201 Introduction to Multiculturalism.....	3
EDFE 444 Student Teaching	12
EDLS 361 Clinical Intermediate Grades	2
or	
EDLS 362 Clinical Middle School.....	2

Note — The 12 hours of student teaching, EDFE 444, must be at the middle school level.

Dual Certification Middle School/Elementary

Students may receive dual certification in middle school (5-9) and elementary education (K-6). They must complete the following requirements: a) combination of elementary and middle school methods classes; b) PTE requirements; c) declared liberal arts major(s) (see options above); d) post baccalaureate student teaching experience that would include a minimum of 18 hours student teaching split between elementary and middle school and EDEL 472 (3 hours).

Certification Program in Special Education

Emphasis in Teaching Students with Profound Needs

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	35
Complete a liberal arts major recommended by advisor	39
Complete PTE program	
Complete general electives to total a minimum of	120

This program is designed for students who seek teaching certification in Special Education: Teaching the Severely/Profoundly Handicapped.

Its second goal is to prepare students for an advanced degree in Special Education. The program fosters the educational professionalism and teaching competencies that are essential to the education of the severely/profoundly handicapped in school and community.

Required Courses — 35 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 ..	4
EDSE 404 Methods of Teaching the Severely/Profoundly Handicapped 9- Adulthood	4
EDFE 444 Student Teaching Practicum	6-12

Certification and Credentialing

School Counselor Certification

Students seeking initial Colorado Endorsement for a Type B or E certificate (School Counseling) should contact the Teacher Education Center in McKee Hall for state proficiency examination requirements.

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

The following requirements must be met by persons requesting institutional recommendation for school counselor certification from the University of Northern Colorado:

For those persons who have completed a master's, specialist or doctoral degree in an area other than counseling:

- Applicants must have two years of public school teaching experience or recent comparable work experience (2260-R-8.01 [10] of certification standards for school counselor certification in Colorado) and must have completed the following courses and requirements or their equivalent.

For secondary school endorsement:

PPSY 565, 602, 604, 605, 606, 607, 608, 611, 615 or 612, 614, 652, 653, 671

For elementary school endorsement:

PPSY 565, 602, 604, 605, 606, 607, 608, 611, 615 or 612, 613, 652, 653, 671

For K-12 endorsement:

PPSY 565, 602, 604, 605, 606, 607, 608, 611, 615 or 612, 613, 614, 652, 653, 671

- Depending on previous course work, the applicant may be required to take additional course work in the areas of personality, development, and child abuse and neglect.
- The applicant must pass master's comprehensive examination in school counseling before being recommended.
- Persons who have not completed a master's degree are required to complete the M.A. program in elementary or secondary school counseling at UNC in order to receive institutional recommendation.

Those students without a Colorado Teaching Certificate wishing to pursue school counseling certification must include the following courses in their programs: Philosophy of Education, Modern Curricular Trends and Issues, Learning Applied to Classroom Teaching, or their approved equivalents. These students must also pass the California Achievement Test. Students who have a valid teaching certificate from another state must have their transcripts evaluated by the Teacher Education Center for the courses listed above.

Application for Certification

Upon satisfactory completion of a certification program and any additional requirements that may be imposed by state law, a person is eligible for institutional recommendation to the State Commission on Teacher Education and Certification for the appropriate certification in Colorado. Near the end of the quarter that the certification program is to be completed, the candidate should complete application forms in the Teacher Education Center. 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. This involves recommendations of the program director, the advisor, and the program faculty.

Certification in Educational Media

Media Endorsements

Endorsement — Elementary School Media	18
Endorsement — Educational Media Specialist	
K-12 Media Specialist Endorsement	33
K-6 Media Specialist Endorsement	30
7-12 Media Specialist Endorsement	30

Certification in Educational Media may be obtained at two different levels, Elementary School Media and Educational Media Specialist. The Educational Media Specialist is available at three levels: K-12, K-6, and 7-12.

Endorsement — Elementary School Media

To be endorsed in Elementary School Media by the State of Colorado Department of Education, an applicant must meet the following requirements. The successful applicant will:

- hold a bachelor's degree (or higher) from an accredited 4-year institution;
- have completed an approved teacher preparation program and be certified in Elementary Education;
- have completed two years of successful teaching experience or Media/Library experience while holding a valid Elementary Teaching Certificate.

Endorsements are granted by the Colorado Department of Education upon the recommendation of the University of Northern Colorado Certification 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. Students should be prepared to present evidence of course appropriateness (e.g., a catalog) regarding any questions regarding the content, scope and/or focus of a course taken at another university.

Elementary School Media Endorsement Course Requirements

ET 503 Computer Based Education	3
ET 504 Design of Instructional Materials	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

Endorsement — Educational Media Specialist

To be endorsed as an Educational Media Specialist by the State of Colorado Department of Education, an applicant must meet the following requirements.

The successful applicant will:

- hold an M.A. (or higher) degree from an accredited 4-year institution;
- hold a Type A (or equivalent) teaching certificate;
- have completed three years of successful teaching experience and/or school media experience while holding a valid Type A 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 Educational Media Specialist 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 an Educational Media Specialist Endorsement should investigate the M.A. program in Educational Media.

Endorsements are granted by the Colorado Department of Education upon the recommendation of the University of Northern Colorado Certification 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. Students should be prepared to present evidence of course appropriateness (e.g., a copy of the course description).

Media Specialist Endorsement Course Requirements — All Levels

ET 502 Instructional Development	3
ET 503 Computer Based 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
EPRE 600 Introduction to Graduate Research	3
EDRD 614 Children's and Adolescent Literature	3

Endorsement Requirements: K-6, 7-12, K-12

EDFE 610 Field Experience (K-6)	3
<i>(required for K-6, K-12 endorsement)</i>	
EDFE 610 Field Experience (7-12)	3
<i>(required for 7-12, K-12 endorsement)</i>	
Endorsement: All Levels	27
Endorsement: Specific Levels	3-6

Principal's Certification (Non-Degree)

Admission

In addition to meeting Graduate School admission requirements, applicants must either have a master's degree or must be nearing completion of the M.A. in educational administration at this University. Applicants must also present supervisory ratings on dimensions of leadership (on forms available from the program unit), self-ratings, resumes, a written statement of goals and purposes in seeking admission, and must complete a satisfactory interview with the admissions committee of the program unit. For applicants who live more than 40 miles from Greeley, telephone interviews may be arranged. Admissions decisions are made during the last two weeks of each semester or term.

Required Courses

*EDAD 525 Governance of American Education	3
*EDAD 610 School Finance and Budgeting	3
*EDAD 620 Law and the Administrator	3
*EDAD 630 Planning and Change in Education	3
*EDAD 650 School Personnel Administration	2
*EDAD 670 The School Principalship	3
*EDF 662 Foundations of Curriculum Development and Instructional Practice	4
EPRE 670 Evaluation: Models and Design	3
or	
EPRE 674 Educational Testing	3
EDAD 632 Supervision and Evaluation	3
EDAD 641 Seminar on Decision Theory	3
EDAD 642 Seminar on Communication and Community Relations	3
PPSY 602 Foundations of School Guidance	3
or	
PPSY 608 Organization, Administration, and Consultation in Guidance Services	3

Note — Courses marked * are required in M.A. in Educational Administration

Emphasis on Elementary Principal's Endorsement

EDAD 671 Seminar on Managing the Elementary School	2
EDAD 680 Internship in Educational Administration	3
<i>(Elementary School Principal)</i>	
<i>Choose one of the following:</i>	
EDEL 612 Elementary School Curriculum	3
EDEL 678 Outcomes Based Education	2
EDEL 679 Appraisal, Evaluation and Clinical Supervision of Teaching Elementary and Middle School	4
Electives to total at least 45 semester hours beyond the B.A.	

Emphasis on Middle School/Junior High School Principal's Endorsement

EDAD 672 Seminar on Managing the Middle School	2
EDAD 680 Internship in Educational Administration	3
<i>(Middle School/Junior High School Principal)</i>	
<i>Choose one of the following:</i>	
EDMS 665 Middle School Theory, Philosophy, and Curriculum	3
EDMS 667 Assessment, Design, and Evaluation of Elementary and Middle School Curriculum	3
Electives to total at least 45 semester hours beyond the B.A.	

Emphasis on Secondary School Principal's Endorsement

EDAD 673 Seminar on Managing the Secondary School	2
EDAD 680 Internship in Educational Administration	3
<i>(Secondary School Principal)</i>	
EDF 667 Modern Curriculum Trends and Issues	2
Electives to total at least 45 semester hours beyond the B.A.	

Note

This program may be completed in conjunction with an advanced graduate degree.

Superintendent's Certification (Non-Degree)

This program requires at least 64 semester hours of graduate work beyond the B.A. All specific course requirements in the M.A. in Educational Administration: Elementary/Secondary and the principal's certification program must be completed.

Admission

In addition to meeting Graduate School admission requirements, applicants must present supervisory ratings on dimensions of leadership (on forms available from the program unit), self-ratings, resumes, a written statement of goals and purposes in seeking admission, and must complete a satisfactory interview with the admissions committee of the program unit. For applicants who live more than 40 miles from Greeley, telephone interviews may be arranged. Admissions decisions are made during the last two weeks of each semester or term.

Required Courses

*EDAD 525 Governance of American Education	3
*EDAD 610 School Finance and Budgeting	3
*EDAD 620 Law and the Administrator	3
*EDAD 630 Planning and Change in Education	3
*EDAD 650 School Personnel Administration	2
*EDAD 670 The School Principalship	3
*EDF 662 Foundations of Curriculum Development and Instructional Practice	4
**EPRE 670 Evaluation: Models and Design	3
or	
EPRE 674 Educational Testing	3
**EDAD 632 Supervision and Evaluation	3

**EDAD 641 Seminar on Decision Theory	3
**EDAD 642 Seminar on Communication and Community Relations	3
**PPSY 602 Foundations of School Guidance	3
or	
PPSY 608 Organization, Administration, and Consultation in Guidance Services	3
EDAD 611 School Business Management	3
EDAD 651 Conflict Management in Education	3
EDAD 744 Seminar on Organization and Administrative Theory	3
EDAD 745 Seminar on Executive Leadership	3
<i>Choose one of the following:</i>	
EDF 640 Psychological Foundations of Education	3
EDF 665 Sociological Foundations of Education	3
EDF 685 Philosophical Foundations of Education	3
EPRE 540 Theories and Principles of Learning	3
or	
EPRE 681 Learning and Cognitive Processes	3
ET 503 Computer Based Education	3
EDAD 680 Internship in Educational Administration	3
<i>(School District Administrator)</i>	

Elective courses to total 64 semester hours of graduate work beyond the B.A.

* Required in M.A. in Educational Administration
 ** Required in Principal's Certification Program

Minor in Early Childhood: 18 semester hours

Program Requirements

Complete the required courses specified here 18

Required Courses — 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 course work 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: 20 semester hours

Required Courses — 2-7 semester hours

*EDRD 409 Developmental Reading Practicum.....	3
*EDRD 410 Achieving Effective Instruction in Developmental Reading	3
*EDRD 411 Reading Diagnosis and Individualization.....	3
**EDRD 420 Reading in the Secondary School.....	2

Note — *Elementary Education Majors; **Secondary Education majors. These courses will be counted within the required 20 hours of credit to complete the minor.

Elective Courses

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 412 Content Reading and Writing in the Elementary and Middle School.....	3
EDRD 414 Literature for Children, Adolescents, and Young Adults	3
EDRD 415 Current Trends and Issues in Reading/Language Education.....	3
EDRD 418 Communication Skills in a High-Tech Society	2
EDRD 419 Reading and Writing Development of Preschool/Primary Children	2

Note — Elective courses are to be chosen in consultation with advisor.

Minor in Special Education: 18 semester hours

This program is designed for undergraduate students who desire a special education minor to accompany any major or teacher certification 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 Courses — 12 semester hours

<i>Special Education Core</i>	
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 Courses — 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	3

College of Health and Human Services

Communication Disorders.....	183
Dietetics	188
Gerontology	189
Health	191
Human Rehabilitative Services	193
Nursing	195
Certification Program	198
Minors	199

Location: McKee 22
Telephone: 351-2877
Vincent Scalia, Dean

Programs in the College of Health and Human Services prepare students for a variety of health professions. These programs also provide a strong liberal arts and general education foundation, allowing graduates to compete successfully for career opportunities and to pursue advanced educational opportunities. Students receiving graduate degrees are especially well prepared to take leadership positions at state and national levels.

College of Health and Human Services faculty assist students in developing their potential through nurturing a sense of self-worth, an awareness of social and moral issues and a concern for the welfare of others. The faculty designs individual learning experiences to meet the needs of students.

The College contains four units: the Department of Communication Disorders, the Department of Community Health, the Department of Human Services and the School of Nursing. Programs within each unit are approved and/or accredited by appropriate organizations.

Clinics

Faculty and students from all programs in the college participate in the college's multidisciplinary health clinics that provide student learning experiences and client care services. Health activities in the clinics emphasize health, rehabilitation, health promotion and disease prevention. All clinics are located in McKee Hall.

The Speech-Language Pathology and Audiology 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 component 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.

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 is a regional center for the Health Risk Appraisal Program.

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

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

Communication Disorders

Location: McKee Hall 27
Telephone: 351-2734
Donna J. Bottenberg, Chair

Professors — Francis A. Griffith, PhD; Raymond H. Hull, PhD

Associate professors — Donna J. Bottenberg, PhD; Dennis R. Ingrisano, PhD

Assistant professors — Linda K. Cleeland, MA, MEd; Ellen Meyer Gregg, PhD; Lawrence Shotland, PhD

Clinical Staff — Linda K. Kiyota, MA

The Department of Communication Disorders offers two educational programs, both with clinical orientation. The department also houses the Speech-Language Pathology and Audiology Clinic. Students majoring in areas of this department who meet the grade point requirements 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 and clinical preparation. Areas emphasized include:

- Diagnosis of a broad range 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.
- 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.

This program offers extensive supervised clinical experience through the well-equipped UNC Speech-Language Pathology and Audiology Clinic and ancillary clinics and programs in northern Colorado. The program is accredited for audiological services through the Professional Services Board 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) (Type E Certification in Educational Audiology), and by the Educational Standards Board (ESB) of the BESPA.

Career opportunities include positions in hospital 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, stuttering, 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 ESB of the BESPA.

Career opportunities include positions in schools; hospitals; ear, nose and throat medical practices; rehabilitation centers; and private practice.

Community Health Education

Administered by the Department of Community Health
Location: Michener L136
Telephones: 351-2755, 351-2757
James Robinson III, Chair

Professors — Bryan E. M. Cooke, PhD; William G. Parkos, PhD

Associate professor — James Robinson III, EdD

Assistant professors — Larry R. Harrison, MS; Frederick MacCormack, PhD; Kathleen Zavela, PhD

The Department of Community Health 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 Arts in Health Education: Emphasis in Community 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 resources in health. Course work 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 that has been approved by the Society of Public Health Education.

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, Food and Nutrition

Administered by the School of Nursing

Location: McKee Hall

Telephone: 351-2293

Marie Miller, Director

Assistant professors - Karen Stevenhagen, DrPh; Sherrie Frye, PhD

Instructor — Mary Capra, MS

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.

Gerontology

Administered by the Department of Human Services

Location: McKee Hall 41

Telephone: 351-2403

Raymond E. Nelson, PhD, Chair

Karen A. Roberto, PhD, Coordinator

Priscilla J. Kimboko, PhD

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. A broad spectrum of courses are 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: Gerontology; Minor in Gerontology; Master of Arts in Gerontology; and a Graduate Certificate in Gerontology.

Human Rehabilitative Services

Administered by the Department of Human Services

Location: McKee Hall 41

Telephone: 351-2403

Raymond Nelson, Chair

Professors — Garth Eldredge, PhD; Dennis Gay, PhD; Vincent A. Scalia, EdD; Richard R. Wolfe, PhD

Assistant professors — Daniel F. Crawford, PhD; Juliet H. Fried, EdD; Priscilla J. Kimboko, PhD; Catherine A. Marshall, PhD; Raymond E. Nelson, PhD; Karen A. Roberto, PhD

The Department of Human Services' Human Rehabilitative Services Program is the only department in Colorado to offer the following undergraduate and graduate degree programs: Bachelor of Science: Human Rehabilitative Services; Master of Arts: Rehabilitation; Master of Arts: Rehabilitation Counseling with Emphasis: 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 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.

School of Nursing

Location: McKee Hall 529

Telephone: 351-2293

Marie Miller, Director

Associate professors — Agnes Biegel, MSN; Marie Miller, PhD; Judy Richter, PhD; Nancy White, PhD

Assistant professors — Sandra Baird, MS; Nancy Beardslee, EdD; Doris Davis-Carraher, MS; Ruth DePalma, MS; Janet Galeener, MS; Virginia Kinnick, MSN; Jane Koeckeritz, MS; Judy Malkiewicz, MS; Majel Martin, MS; Joanne Supples, PhD

Instructors — Faye Hammel, MS; Janice Martin, MS; Diane Peters, MS

The undergraduate program in nursing is a 9 semester program leading to a bachelor of science degree. Qualified students are prepared as professional nurses and receive a foundation for graduate study in nursing.

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

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	50
Complete general electives to total	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 Courses — 50 semester hours

CMDS 160 Introduction to Human Communication Disorders	3
CMDS 260 Introduction to Phonetics	3
CMDS 265 Acoustics of Speech.....	2
CMDS 266 Normal Speech and Language Development.....	3
CMDS 267 Anatomy and Physiology of the Speech and Hearing Mechanism	3

CMDS 360 Articulation, Stuttering and Voice Disorders	3
CMDS 365 Language Disorders in Children I.....	2
CMDS 370 Basic Audiology.....	4
CMDS 371 Speech and Hearing Science.....	4
CMDS 386 Basic Clinical Strategies in Speech-Language	4
<i>Pathology and Audiology</i>	
CMDS 472 Advanced Audiology.....	3
CMDS 474 Clinical Practicum in Audiology	1
CMDS 480 Introduction to Aural (Re)habilitation.....	3
CMDS 483 Entry/Primary Speech-Language Pathology Practicum.....	2
EDSE 451 Basic Sign Language	3
ZOO 115 Human Biology	3
ZOO 245 Introduction to Human Anatomy-Physiology	4

Notes

Students participating in supervised clinical activities must pay an annual liability insurance premium.

Laboratory material fees are assessed for the following courses: CMDS 370, CMDS 371, CMDS 474, and CMDS 483

Bachelor of Arts in Communication Disorders: Speech-Language Pathology

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	54
Complete general electives to total	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 Courses — 54 semester hours

CMDS 160 Introduction to Human Communication Disorders	3
CMDS 260 Introduction to Phonetics	3
CMDS 265 Acoustics of Speech.....	2
CMDS 266 Normal Speech and Language Development.....	3
CMDS 267 Anatomy and Physiology of the Speech and Hearing Mechanism	3
CMDS 360 Articulation, Stuttering and Voice Disorders	3
CMDS 365 Language Disorders in Children I.....	2

CMDS 366 Language Sampling Processes.....	1
CMDS 370 Basic Audiology.....	4
CMDS 371 Speech and Hearing Science.....	4
CMDS 386 Basic Clinical Strategies in Speech-Language	4
<i>Pathology/Audiology</i>	
CMDS 431 Organically-Based Communication Disorders.....	3
CMDS 467 Diagnostic Methods and Observation	3
CMDS 472 Advanced Audiology.....	3
CMDS 474 Clinical Practicum in Audiology	1
CMDS 480 Introduction to Aural (Re)habilitation.....	3
CMDS 483 Entry/Primary Speech-Language Pathology Practicum.....	2
CMDS 485 Advance Undergraduate Speech-Language Pathology Practicum.....	4
EDSE 451 Basic Sign Language	3

Notes

Students participating in supervised clinical activities must pay an annual liability insurance premium.

Laboratory material fees are assessed for the following courses: CMDS 370, CMDS 371, CMDS 474, CMDS 483, CMDS 485.

Master of Arts in Communication Disorders: Audiology

Certifying Master's Degree

Program Requirements

Complete the required courses 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 a broad range 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 the admission requirements of the Graduate School, students will be admitted to this limited-enrollment program on the basis of 1) a B or better average in undergraduate course work in the major; 2) at least two letters of recommendation from persons familiar with their academic/clinical performance, and 3) Graduate Records 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 Courses — 53-56 semester hours

CMDS 555 Neuroanatomy and Neurophysiology of Communication	3
CMDS 570 Rehabilitative Audiology	3
CMDS 571 Speech and Hearing Science	4
CMDS 572 Industrial/Public Health Audiology	2
CMDS 573 The Auditory Mechanism.....	3
CMDS 574 Clinical Practicum in Audiology	1
CMDS 580 Practicum in Rehabilitative Audiology	4
CMDS 582 Pediatric/Educational Audiology	3
CMDS 594 Advanced Clinical Practicum in Audiology	4
CMDS 615 Seminar in Communication Disorders	1
CMDS 671 Psychoacoustics.....	2
CMDS 675 Differential Diagnosis of Auditory Problems.....	5
CMDS 678 Hearing Aids and Uses of Amplification	3
CMDS 692 Internship in Medical Settings	12 or 15
HRS 610 Interpretation and Evaluation of Behavioral Research.....	3
<i>(or its equivalent)</i>	

Notes

In addition to the required courses shown above, CMDS 568 Counseling in Communication Disorders for 3 credit hours and CMDS 673 Practicum in School Audiology are required for the Type E Certificate as School Audiologist granted by the Colorado Department of Education.

If the student decides to complete a thesis, 6 hours of CMDS 699 Thesis: Communication Disorders and three 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 the Type E certificate from the Colorado Department of Education by taking required additional courses 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.

Students participating in supervised clinical activities must pay an annual liability insurance premium.

Laboratory material fees are assessed for the following courses: CMDS 571, 574, 580, 594

Master of Arts in Communication Disorders: Audiology

Non-Certifying Degree

Program Requirements

Complete the required courses specified here.....32

This program is designed to provide students academic course work 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 Type E certification.

Students from foreign countries 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 the admission requirements of the Graduate School, students will be admitted to this program on the basis of 1) a B or better average in undergraduate course work in the major; 2) at least two letters of recommendation from persons familiar with their academic performance, and 3) Graduate Records 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 Courses — 32 semester hours

CMDS 555 Neuroanatomy and Neurophysiology of Communication	3
CMDS 570 Rehabilitative Audiology	3
CMDS 571 Speech and Hearing Science	4
CMDS 572 Industrial/Public Health Audiology	2
CMDS 573 The Auditory Mechanism.....	3
CMDS 582 Pediatric/Educational Audiology	3
CMDS 615 Seminar in Communication Disorders	1
CMDS 671 Psychoacoustics.....	2
CMDS 675 Differential Diagnosis of Auditory Problems	5
CMDS 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, 6 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.

Master of Arts in Communication Disorders: Speech-Language Pathology

Certifying Master's Degree

Program Requirements

Complete the required courses specified here.....60-72

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, stuttering, 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 the admission requirements of the Graduate School, students will be admitted to this limited-enrollment program on the basis of 1) a B or better average in undergraduate course work in the major; 2) at least two letters of recommendation from persons familiar with their academic/clinical performance, and 3) Graduate Records 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 Courses

CMDS 483/583 Entry/Primary Speech-Language Pathology Practicum	2
CMDS 555 Neuroanatomy and Neurophysiology of Communication	3
CMDS 561 Voice Disorders and Cleft Palate	3
CMDS 565 Neurogenic Communication Disorders.....	5
CMDS 568 Counseling in Communication Disorders.....	3

CMDS 569 Advanced Diagnostic Procedures	4
CMDS 585 Advanced Graduate Practicum in Speech-Language Pathology.....	4
CMDS 592 Internship in Public Schools	12 or 15
HRS 610 Interpretation and Evaluation of Behavioral Research	3
(or its equivalent)	
CMDS 615 Seminar in Communication Disorders	3
CMDS 660 Articulation Disorders.....	3
CMDS 662 Stuttering.....	3
CMDS 663 Language Disorders in Children II.....	3
CMDS 681 Experimental Phonetics.....	3
CMDS 692 Internship in Medical Settings	12 or 15

Notes

Students must complete CMDS 571 Speech and Hearing Science if they do not have a comparable undergraduate course. 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 a thesis may be exempted from one of these externships, with the consent of their academic advisor, and they must complete CMDS 699 Thesis: Communication Disorders for six credit 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 the Type E Certificate 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.

Students participating in supervised clinical activities must pay an annual liability insurance premium.

Fees are assessed for the following courses: CMDS 483/583, CMDS 569, CMDS 571, and CMDS 585.

Master of Arts in Communication Disorders: Speech-Language Pathology

Non-Certifying Degree

Program requirements

Complete the required courses specified here.....36

This program is designed to provide students academic course work 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 Type E certification.

Students from foreign countries 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 the admission requirements of the Graduate School, students will be admitted to this program on the basis of 1) a B or better average in undergraduate course work in the major; 2) at least two letters of recommendation from persons familiar with their academic performance, and 3) Graduate Records 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 Courses — 36 semester hours

CMDS 555 Neuroanatomy and Neurophysiology of Communication	3
CMDS 561 Voice Disorders and Cleft Palate	3
CMDS 565 Neurogenic Communication Disorders.....	5
CMDS 571 Speech and Hearing Science.....	4
CMDS 586 Basic Clinical Strategies in Speech-Language Pathology/Audiology	4
CMDS 615 Seminar in Communication Disorders	2
CMDS 660 Articulation Disorders.....	3
CMDS 662 Stuttering.....	3
CMDS 663 Language Disorders in Children II.....	3
CMDS 681 Experimental Phonetics	3
HRS 610 Interpretation and Evaluation of Behavioral Research.....	3

Notes

If the student decides to complete a thesis, 6 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.

Bachelor of Arts in Dietetics

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	35.5-37.5
Complete required support courses specified here (some qualify as GE)	69
Complete general electives to total	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 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 Courses — 35.5-37.5 semester hours

FND 210 Medical Terminology.....	5
FND 251 Nutrition in Life Cycle I.....	3
FND 252 Nutrition in Life Cycle II.....	3
FND 342 Food Science I.....	4
FND 343 Food Science II.....	4
FND 351 Advanced Nutrition	3
FND 353 Clinical Nutrition.....	4
FND 410 Professional Development Seminar.....	3
FND 446 Food Service and Production	3
FND 447 Food Purchasing and Preparation.....	4
FND 452 Community Nutrition.....	3
FND 453 Nutrition Intervention Practicum	1-3

Required Support Courses — 69 semester hours

Sciences

BIO 351 Microbiology	4
CHEM 111 Principles of Chemistry I.....	5
CHEM 131 Introductory Organic Chemistry.....	4
CHEM 208 Fundamentals of Human Biochemistry	5
CHEM 395 Food Chemistry.....	3
ZOO 115 Human Biology	3
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4

Business

BAAC 220 Principles of Accounting I.....	3
BACS 283 Microcomputer Systems in Administration/Business	3
BACS 300 Information Systems	3
BAMG 350 Management.....	3

Other

ANT 110 World Cultures	3
BAMG 453 Human Resources Management	3
or	
PSY 366 Industrial Psychology	3
ECON 103 Introduction to Economics: Macroeconomics	3
or	
ECON 105 Introduction to Economics: Microeconomics	3
ENG 125 Technical Writing	3
NURS 315 Clinical Research and Theory	3
PSY 120 Principles of Psychology	4
PSY 241 Learning and Cognition.....	4
STAT 301 Statistics for Health Sciences.....	3

Note

Dietetic majors are charged a laboratory fee when they enroll in the following courses: FND 342, FND 343, FND 447.

Bachelor of Science in Gerontology

Program Requirements

Complete the required courses specified here.....	29
Complete the required support course specified here.....	4
Complete program electives specified here	10
Complete the General Education program as outlined.....	40
Complete a minor or supporting area approved by major advisor	18
Complete general electives to total	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.

General Education

Category 5 — Social Sciences

PSY 230 Human Growth and Development	4
SOC 100 Principles of Sociology	3

Category 7 — Interdisciplinary

HRS 290 Introduction to Human Rehabilitative Services.....	3
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Required Courses — 29 semester hours

BIO 415 Biology of Aging.....	2
GERO 205 Introduction to Gerontology	3
GERO 460 Community Resources for the Elderly	3
GERO 465 Management Concepts in Aging Services.....	3
GERO 492 Undergraduate Internship in Gerontology.....	12
HRS 394 Practicum in Human Services	3
HRS 480 Human Service Helping Skills	3

Required Support Course

ZOO 245 Introduction to Human Anatomy Physiology	4
--	---

Elective Courses — 10 semester hours

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
PSY 331 Maturity and Aging	3
REC 251 Leisure, Recreation and the Older Adult	2
SOC 371 Sociology of Aging.....	3

Note

Select 10 required credit hours

Master of Arts in Gerontology

Emphasis Generalist

Program Requirements

Complete the required courses specified here.....45

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.

Required Courses — 45 semester hours

GERO 560 Community Resources for the Elderly	3
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 & Evaluation of Behavioral Research.....	3
Advisor-approved electives	12

Note

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

Master of Arts in Gerontology

Emphasis in Direct Service

Program Requirements

Complete the required courses specified here.....45

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.

Required Courses — 45 semester hours

GERO 560 Community Resources for the Elderly	3
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 & Evaluation of Behavioral Research.....	3
HRS 630 Human Services Counseling Theories & Techniques.....	3
HRS 694 Practicum in Rehabilitation Counseling	3
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.

Master of Arts in Gerontology

Emphasis in Management/Administration

Program Requirements

Complete the required courses specified here.....45

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.

Required Courses — 45 semester hours

GERO 560 Community Resources for the Elderly	3
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 & 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 & Evaluation of Behavioral Research.....	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

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	46
Complete program electives	20
Complete general electives to total	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, health promotion programs in business and industry, patient education in hospitals, and wellness programs for the elderly.

Students must complete a full-time internship following the completion of all other required courses. In order to enroll in internship, students must have at least a 2.50 grade point average.

General Education

Category 5 — Social Sciences

PSY 120 Principles of Psychology	4
SOC 100 Principles of Sociology	3

Category 6 — Science and Mathematics

CHEM 108 Fundamentals of General and Organic Chemistry	5
ZOO 115 Human Biology	3

Category 7 — Interdisciplinary, Multicultural, and International Studies

CH 236 Health & Lifestyle Among the Elderly	3
or	
GERO 205 Introduction to Gerontology	3

Required Courses — 46 semester hours

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

Elective Courses — 20 semester hours

Electives must be approved by the student's major advisor.

Master of Arts in Health Education

Emphasis in Community Health

Program Requirements

Complete the required courses specified here.....	37
Complete program electives specified here	8

Students earning the Master of Arts in 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 Arts degree in Health Education: Community Health on either a part-time or full-time basis. Graduate tuition scholarships and teaching 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 and successfully pass a written comprehensive examination in order to complete the Master of Arts program.

Admission

In addition to 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.

Required Courses — 37 semester hours

CH 509 Seminar in Health Behavior.....	3
CH 520 Epidemiology	3
CH 525 Public Health Administration and Policy	3
CH 550 Environmental Health	3
CH 560 Scientific Foundations of Health Promotion/Disease Prevention..	3
CH 610 Program Planning and Evaluation.....	4
CH 630 Seminar in Health Promotion Strategies	3
CH 640 Principles of Health Program Management	3
CH 692 Graduate Internship in Health Education.....	6
EPRE 602 Elements of Statistics.....	3
HRS 610 Interpretation and Evaluation of Behavioral Research	3

Elective Courses — 8 semester hours

Electives units selected with consent of advisor.

Notes

Students wishing to pursue a thesis option in lieu of electives must do so in consultation with their advisor.

Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

Bachelor of Science in Human Rehabilitative Services

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	39
Complete concentration area.....	18
Complete general electives to total	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 Courses — 39 semester hours

GERO 235 Issues in Adulthood.....	3
HRS 290 Introduction to Human Service	3
HRS 380 Rehabilitation Principles and Case Management.....	3

HRS 385 Working with Families in Rehabilitation	3
HRS 390 Rehabilitative Community Services.....	3
HRS 394 Practicum in Human Services	3
HRS 470 Client Assessment	3
HRS 480 Human Service Helping Skills	3
HRS 490 Career Planning and Placement.....	3
HRS 492 Supervised Field Practice	12

Area of Concentration

Students must complete an area of concentration designed as a coherent block of advisor approved courses totaling 18 credits; 3 that must be a practicum in Human Services. This practicum will be in addition to the practicum requirements of the core and should reflect the theme of the student's concentration area. If a student desires, an advisor approved minor may be taken in lieu of a concentration area.

Master of Arts in Rehabilitation Counseling

Emphasis in Vocational Evaluation

Program Requirements

Complete the required courses specified here.....	42
Complete program electives specified here	9

Required Courses — 42 semester hours

HRS 580 Rehabilitation Principles and Case Management.....	3
HRS 581 Vocational Evaluation and Assessment of the Handicapped.....	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 Process in Rehabilitation.....	3
HRS 692 Supervised Clinical Practice in Rehabilitation Counseling	15
HRS 694 Practicum in Human Services Counseling	3

Note — Required courses may be waived only by the department chair on written recommendation of the student's advisor.

Elective Courses — 9 semester hours

HRS 590 Rehabilitation Services in Facilities and Private Sector.....	3
HRS 597 Rehabilitation of the Substance Abuser	3
HRS 635 Role of the Family in Rehabilitation.....	3
HRS 650 Rehabilitation Management	3
GERO 665 Grant Development and Administration	3

Note — To complete requirements for rehabilitation counseling, 9 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.

Vocational Evaluation Courses — 12 semester hours

HRS 611 Vocational Evaluation Planning & Reporting.....	3
HRS 612 Seminar in Vocational Evaluation Systems.....	3
HRS 660 Advanced Seminar in Client Assessment	3
HRS 693 Practicum in Vocational Evaluation.....	3

Notes

Students desiring dual competency in Rehabilitation Counseling and Vocational Evaluation must complete 42 credits of required core courses; 9 credits from required electives and 12 credits in vocational evaluation for a minimum total of 63 credits. Students seeking dual competency must apply to the Department and receive faculty approval before enrolling in the Vocational Evaluation Emphasis.

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 courses specified here.....	64
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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 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 subsequent to 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 Courses — 37 semester hours

EPRE 700 Introduction to Research	
or	
STAT 715 Planning & 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 794 Advanced Clinical Internship.....	6
HRS 797 Doctoral Proposal Research	4
HRS 799 Doctoral Dissertation	12

Research and Statistical Requirements — 12 semester hours

All doctoral students are required to take a minimum of 12 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 60 credits required for doctoral course work.

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. Prepare and demonstrate a computer program written to meet a specific application need in the Department of Human Services. This program will 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 Courses — 27 semester hours

The remainder of the student's courses will be selected by the student and the program committee on the basis of the student's background and interests.

Bachelor of Science in Nursing

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required support courses specified here	40
Complete the required nursing courses specified here	66.5-68.5
Complete general electives to total	129.5-132

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 are eligible to write the Colorado State Board of Nursing examination for licensure as registered nurses, as well as the examinations of all other states.

Required Courses — 66.5-68.5 semester hours

NURS 300 Conceptual Foundations.....	3
NURS 301 Physical Assessment Theory	2
NURS 302 Physical Assessment Lab.....	0.5
NURS 303 Basic Nursing Practice	4
NURS 304 Childbearing Families	3
NURS 306 Nursing Care of Children	3
NURS 309 Adult Nursing Systems I.....	3
NURS 315 Clinical Research and Theory	3
NURS 329 Adult Nursing Systems 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	4
NURS 420 Community Nursing Practicum.....	4
NURS 440 Complex Nursing Systems	3
NURS 450 Professional Nursing Roles	5
NURS 470 Mental Health Practicum.....	4
Nursing elective	1-3

Required Support Courses — 40 semester hours

BIO 351 Microbiology	4
CHEM 108 Fundamentals of General and Organic Chemistry	5
CHEM 208 Fundamentals of Human Biochemistry	5
ENG 123 College Research Paper.....	3
FND 357 Nutrition in Health and Illness	4
PSY 230 Human Growth and Development	3
STAT 301 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

For Registered Nurses Only:

NURS 305 Conceptual Foundations for RNs	3
NURS 328 Physical Assessment for RNs	3

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.

Admission Policy: 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.

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 2.25 will be considered. Only applicants who, at the time of application, have earned a cumulative grade point average of 2.0, based on a 4.0 scale in the required support science courses CHEM 108, and ZOO 115, ZOO 341, and ZOO 350 will be considered.
- 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.

Admission Policy: CPR Certification. All students entering the professional clinical nursing major must be certified in cardiopulmonary resuscitation (CPR) as evidenced by current CPR card. This certification must be maintained while in the program. CPR courses are available outside the School of Nursing.

Admission Policy: 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 students 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 and successful completion of advanced standing credit examinations.

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 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 mankind 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. 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.

Probation/Termination Policy, Critical Behaviors for Satisfactory Achievement in Clinical Nursing Courses, Withdrawal Policy, Alcohol and Drug Abuse Policy, and Cheating/Plagiarism Policy are published in the required Student Handbook.

Students who must repeat a clinical nursing course or who fail to enroll or complete a course on their scheduled assignment will be readmitted for clinical courses on a space-available basis only. Courses may not be offered every semester.

A student who does not enroll for either required support courses or nursing courses for two successive semesters and has not made prior arrangements with the Director/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.

William R. Ross Award. In 1966, the nursing program faculty established the William R. Ross Achievement Award in honor of the retiring UNC president. This award recognizes a senior nursing student each year for outstanding scholarship, leadership and service.

Health Policies. Within the academic year preceding the first clinical course, the student must have met the University's requirements regarding immunizations, received any necessary update in immunizations (such as Rubella titer, PPD, Diphtheria, Tetanus, and Rubeola/Rubella/Mumps) and have on record a completed physical examination.

School Nurse Certification. 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 laboratory fee for every semester they are enrolled in a clinical laboratory course (NURS 303, NURS 328, NURS 340, NURS 360, NURS 390, NURS 420, NURS 440, NURS 450, NURS 470). This fee is subject to change. Clinical nursing majors may anticipate the following expenses in the summer 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 (highly recommended)	150
Watch with second hand	30
Nursing Achievement Examinations	30
Stethoscope	35
Travel.....	Cost varies

Required uniforms are ordered the semester before clinical assignment. Costs listed here are approximate and subject to change.

Senior year expenses are:

School pin (optional)	Cost varies
Travel.....	Cost varies

Clinical Practice. Student practicums 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.

Master of Science in Nursing

Emphasis Area: Education

Program Requirements
Complete the required courses specified here.....36

The Master of Science in Nursing prepares 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.

The master's program provides expertise valuable for positions in education in community college settings, institutions of higher education, in community health settings and in institutions that provide inpatient care for the chronically ill child or adult.

Required Courses — 36 semester hours

<i>Nursing</i>	
NURS 500 Theory/Curriculum Development	3
NURS 502 Concepts in Chronic Illness	4
<i>or</i>	
NURS 503 Care of Chronically Ill Child	4

NURS 504 Care of Chronically Ill Adult.....	4
NURS 505 Nursing Research	3
NURS 507 Leadership and Change Issues	3

<i>Education</i>	
EPRE 505 Descriptive Statistics	3
EPRE 540 Principles of Learning.....	3
EPRE 674 Measurement I: Basic Principles	3

<i>Selected Specialty Options</i>	
NURS 591 Teaching Practicum	4
NURS 699 Thesis	6
<i>or</i>	
Electives	6

Note
 Successful completion of a written comprehensive exam is required to complete the Master of Arts program.

Gerontology Graduate Certificate Program (Non-Degree)

Program Requirements

Complete the required courses specified here..... 15

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 Courses — 15 semester hours

GERO 560 Community Resources for the Elderly 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

Minor in Communication Disorders: 20 semester hours

Required Courses — 20 semester hours

CMDS 160 Introduction to Human Communication Disorders	3
CMDS 260 Introduction to Phonetics	3
CMDS 265 Acoustics of Speech.....	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.....	2
CMDS 370 Basic Audiology.....	4

Notes

The purpose of this minor is to acquaint interested students with various aspects of disorders of human communication. The minor includes course work 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: 25 semester hours

Required Courses — 19 semester hours

CH 205 Issues in Health	3
CH 209 Foundations of Health Promotion/Education	3
CH 299 Community Health Systems.....	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

Elective Courses — 6 semester hours

Elective units selected with consent of advisor.

Minor in Gerontology: 18 semester hours

Required Courses — 15 semester hours

GERO 205 Introduction to Gerontology	3
GERO 235 Issues in Adulthood	3
GERO 460 Community Resources for the Elderly	3
GERO 465 Management Concepts in Aging Services.....	3
HRS 394 Practicum in Human Services	3

Elective Courses — 3 semester hours (minimum)

CH 236 Health and Lifestyles Among the Elderly	3
CMDS 470 Communication Disorders of the Aging.....	2
GERO 235 Issues in Adulthood.....	3
GERO 395 Special Topics	3
PSY 331 Maturity and Aging	3
REC 251 Leisure, Recreation and the Older Adult	2
SOC 371 Sociology of Aging.....	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 Rehabilitative Services: 18 semester hours

Required Courses — 18 semester hours

HRS 290 Introduction to Human Services	3
HRS 385 Working with Families in Rehabilitation	3
HRS 390 Rehabilitative Community Services.....	3
HRS 394 Practicum in Human Services	3
HRS 480 Human Service Helping Skills	3
HRS 490 Career Planning and Placement.....	3
Note — Three hour practicum should reflect the theme of the student's interest area in the minor.	

Minor in School Health Education: 25 semester hours

Required Courses — 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

Elective Courses — 6 semester hours

Elective courses selected with consent of advisor.

College of Human Performance and Leisure Studies

Kinesiology.....	203
Physical Education	207
Recreation.....	212
Minors	215

Location: Butler-Hancock Hall 230

Telephone: 351-1712

Brian J. Sharkey, Dean

The College of Human Performance and Leisure Studies (HPLS) offers high quality degree programs that combine professional preparation and academic study for careers in physical education, dance, coaching, recreation, athletic training, fitness and exercise, and for advanced professional degrees and careers in the study of exercise, sport, and leisure. Graduates find employment in schools, public and private agencies, business and industry fitness programs, and in the private sector. Graduate degrees prepare students for teaching, research, and administrative roles.

The Department of Kinesiology emphasizes the scientific study of human movement in its courses and laboratories. The Department of Physical Education and Dance provides specialized professional preparation for careers in teaching at the elementary, high school, and college level. The Department of Recreation provides undergraduate and graduate instruction in community recreation, recreation administration, and therapeutic recreation.

The College provides a wide array of physical activity courses for college credit. The College also administers programs in campus recreation, intramurals, and intercollegiate athletics to enrich students' present and future sport, recreation and leisure pursuits. The College provides a fitness program for faculty and staff.

An outstanding faculty of teachers and scholars serves the students enrolled in college programs. Among the 30 faculty members are nationally recognized scholars, researchers, master teachers, and a vigorous group of youthful coaches, teachers, and researchers — all dedicated to providing high quality programs and the personal attention students at UNC have come to expect.

Facilities

Extensive facilities for instruction, recreation, and intercollegiate athletics are housed in HPLS buildings. They include a gymnastics studio, dance studio, two general purpose gymnasiums, one multipurpose arena, weight-training rooms, two swimming pools, twelve tennis courts, a combatives (wrestling) room, a modern athletic training facility, indoor and outdoor tracks, racquetball courts, and a large number of fields and baseball diamonds. Extended instructional opportunities such as bowling, skiing, and skating are available in cooperation with community resources.

Well-equipped laboratories for studying physiological, mechanical, and psychological kinesiology provide excellent instructional and research facilities for students and faculty. A teaching laboratory with state-of-the-art video equipment and computers provide faculty and students with excellent instructional and research capabilities.

Kinesiology

Location: Butler Hancock Hall 200

Telephone: 351-2460

Jerry Barham, Chair

Professors — Jerry Barham, EdD; Theresa Malumphy, PhD; George Sage, EdD; Brian Sharkey, PhD

Associate professor — Daniel Libera, MA

Assistant professors — Jeff Broida, EdD; Catherine Jackson, PhD; Peter M. McGinnis, PhD

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. Courses provide a scientific basis for the study of physical activity, emphasizing theoretical and practical approaches to the improvement of human performance. Each program in the department 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, morphological and general physiological adaptations to acute and chronic exercise. Emphasis is on biochemical properties of muscle and blood, histochemistry of muscle, and the physiological properties of the muscular and cardiorespiratory systems during 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. Psychological kinesiology laboratory equipment is available for testing a wide variety of perceptual-motor abilities; equipment is also available for motor learning and motor control research, as well as biofeedback experiments. Most of the equipment can be interfaced with an online computer.

Physical Education and Dance

Location: Butler-Hancock Hall 229

Telephone: 351-2535

D. Allen Phillips, Chair

Professors — Cynthia Carlisle, EdD; Carolyn Cody, PhD; Sandra Minton, PhD; D. Allen Phillips, EdD

Associate professors — Robert Oliver, PhD; David Stotlar, PhD

Assistant professors — Linda Delk, MA; Rosemary Fri, MA; Karen Genoff-Campbell, MA; Jean Hedberg, MA; Christy Howard, MS; Bobby Rollins, MA; Jeff Steffen, PhD; Jim Stiehl, PhD

Instructors — John Barnes, MA; Mike Breske, MA; Ron Brillhart, MA; Joe Glenn, MA; Scott Hall, MA; Nancy Hinrichs, MA; Brooks McMillen, MA; Janet Schafer, MA; Gordon Shaw, MA; Ron Simonson, MA

The Department of Physical Education and Dance offers majors in physical education and in dance. Majors in this field provide students an in-depth understanding of pedagogy, kinesiology, and the analysis of sport and dance 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.

The Department offers minors in physical education, dance, and coaching. The physical education minor is a teaching minor; whereas, the minors in dance and coaching are designed to provide skills and theory to students who wish to study dance and 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, administration and coaching. Both theory and professional applications are emphasized.

Many laboratory research opportunities are available within the building used by the Department of Physical Education and Dance. Facilities are available for the study and analysis of teaching of physical education and dance. The teaching research laboratory is equipped with state-of-the-art videotaping and computer equipment that is available for student and faculty use. This laboratory is the focal point for the analysis of teaching physical education.

Recreation

Location: Gunter Hall

Telephone: 351-2596

Jane E. Kaufman, Chair

Professor — Norbert Van Dinter, EdD

Associate professor — Jane E. Kaufman, EdD

Assistant professor — Larry A. James, MA

The Department of Recreation and Leisure Studies 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 department 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, community, state, and national agencies.

The department 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 department sponsors a Recreation Majors Club, subscribes to pertinent job bulletins, and maintains detailed files on internship placements available throughout the

world. Additionally, the department 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 programs in Recreation Administration and Therapeutic Recreation are unique to the state of Colorado. The curriculum is designed to prepare students as administrators, clinicians, supervisors, and educators in a variety of leisure service agencies. Courses are scheduled to assist commuting, part-time and working individuals 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.

Aerospace Studies

Office: Crabbe Hall
Telephone: 351-2061
Col. John J. McBroom, Chairman

Faculty

Capt. Allen H. Brody; Capt. Susan M. Weaver

The purpose of the Department of Aerospace Studies is to educate students on matters relating to the United States Air Force, with the ultimate goal of qualifying graduates for commissions as Air Force officers. Both four-year and two-year Air Force Reserve Officer Training Corps (AFROTC) programs are offered, with students earning a minor in Aerospace Studies. Instruction is provided by active duty Air Force officers. Uniforms and specialized textbooks and equipment are provided to the students without charge.

AFROTC graduates enter active duty with the Air Force. Initial assignments may include flight training for pilots and navigators, nursing internships, missile training for missile launch officers, or other technical or management training, depending on the individual's assignment to a career specialty area.

Four-Year Program

The four-year program requires student participation in the General Military Course (GMC) during four semesters or during two semesters while enrolled concurrently in the 100 and 200 levels of the GMC (complete the GMC in one academic year). They must participate in the Professional Officer Course (POC) while enrolled in four academic semesters. During the second year of the GMC, qualified cadets may apply for membership in the POC. Cadets nominated by the Chairman of Aerospace Studies and selected by Headquarters Air Force ROTC will normally attend the field Training Course the summer before the junior year and enter the POC at the beginning of the junior year or four semesters before completion of their academic degree programs. Veterans, participants in Civil Air Patrol or junior ROTC, and former members of service academy preparatory schools or service academies may qualify for waiver of portions of the GMC. Cadets are commissioned as second lieutenants in the Air Force upon completion of the GMC, a four-week Field Training Course, four semesters of undergraduate and/or graduate work while enrolled in the POC, and University degree requirements.

Two-Year Program

The two-year program requires student participation in four undergraduate and/or graduate semesters concurrently with the POC classes. Students will compete for POC selection during the academic year preceding the year of entrance into the POC. Students considering the two-year program should contact the Air Force ROTC Office during the fall semester one year before the year they plan to enter the POC in order to begin qualification actions. Students are commissioned as second lieutenants in the Air Force upon completion of the six-week Field Training Course during the summer before entering the POC, four semesters of undergraduate and/or graduate academic work while enrolled in the POC, and University degree requirements.

Nursing Careers

For nursing students, the Air Force offers a unique field of service. Nursing students who enroll in the Air Force ROTC program receive, on receipt of a bachelor of science degree in nursing, a commission as a second lieutenant in the Air Force Nurse Corps.

Nursing students may compete for either a two-year or three-year scholarship that can pay full college tuition and most textbook, lab and incidental fees, plus \$100 per month (tax free).

AFROTC College Scholarship Program

AFROTC offers scholarships for four years for those students who have not entered college. For those students already enrolled in college, AFROTC offers scholarships for two to three and one-half years, depending on the time remaining in college and the academic major or career specialty desired. The scholarships pay for most tuition, fees, and textbooks each term plus \$100 per month tax-free allowance. Both male and female students, either enrolled in the four-year program or applying for the two-year program, may qualify on a competitive basis. All scholarship cadets must complete one year of a qualifying foreign language.

Military Science

Location: Weber House, 1015 20th Street
University of Northern Colorado
Greeley, CO 80639
351-2296

Commandant of Cadets: MAJ(P) Robert A. Perrich

Location of Host Institution:
101 Military Science Building
Colorado State University
Ft. Collins, CO 80523-0129
491-6506/6507

Professor of Military Science: LTC Robert N. Lyle, Jr.

Faculty

LTC Robert N. Lyle, Jr.; MAJ(P) Robert A. Perrich; CPT Roy McIntire;
CPT Chris Small; SGM Charles D. Jay

The Army Reserve Officer Training Corps program is designed to provide the professional and leadership education necessary to qualify the ROTC cadet for a commission as a second lieutenant in the United States Army. Upon completion of the program, the individual may serve on active duty for three years, or in the Reserve Forces for eight years.

The ROTC cadet is offered a choice of one of 24 career fields in the Army in accordance with academic major and/or individual preference. A list of these specialties may be obtained from the Department of Military Science.

General Program

The Military Science program is subdivided into two levels. The Basic Course (MS 111, 121, 211, 221, 287) is aligned with the freshman and sophomore years and consists of training in the fundamentals of leadership and management, land and navigation, and the organization of the National Defense Establishment. The Advanced Course (MS 311, 321, 387, 401, 421, and HIST 250) is aligned with the junior and senior years and consists of training in leadership assessment, military history, ethics, professionalism, and military law. During the summer between MS III and MS IV the cadet will attend a six-week Advanced Camp (MS 387) at Fort Lewis, Washington where all previously learned military skills are put into practice.

Two-Year Program

A two-year program is available for students who have not taken the first two years of ROTC. (This includes both undergraduate and graduate students with at least two years remaining before graduation.) The student may receive credit for the Basic Course (MS 111, 121, 211, 221) by attending and successfully completing a six-week Basic Camp (MS 287) at Fort Knox, Kentucky.

Scholarship Program

Army ROTC offers two- to four-year scholarships that pay for in-state or out-of-state tuition, fees, a textbook allowance and \$100 per month during the regular school year. The four-year scholarship is awarded to high school juniors and seniors. Two- and three-year scholarships are open to college students at the University of Northern Colorado.

Flight Training

Any Army ROTC cadet may compete for aviation training. If selected, the individuals will attend helicopter flight training after graduation from college.

Bachelor of Arts in Kinesiology

Emphasis in Athletic Training

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	32
Complete program electives specified here	28-29
Complete general electives to total	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.

General Education

Category 6 — Science and Mathematics

CHEM 108 Fundamentals of General and Organic Chemistry	5
ZOO 115 Human Biology	3

Required Courses — 32 semester hours

KINE 220 Anatomical Kinesiology	2
KINE 221 Mechanical Kinesiology	2
KINE 222 Physiological Kinesiology	2
KINE 223 Psychological Kinesiology	2
KINE 324 Maturational Kinesiology	2
KINE 380 Prevention and Care of Sports Injuries	2
KINE 381 Practical Experiences in the Care of Athletic Injuries	12

Note — 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

Elective Courses — 28-29 semester hours

CH 205 Issues in Health.....	3
CHEM 208 Fundamentals of Human Biochemistry	5
KINE 390 Cardiopulmonary Resuscitation Certification.....	1
KINE 404 Exercise, Nutrition, and Body Composition.....	3
KINE 436 Sociology of Physical Activity and Sport	2
PE 206 A & M of Weight Training, Fitness, and Conditioning	2
PE 233 Advanced First Aid and CPR	2
ZOO 341 Human Anatomy	3
ZOO 350 Human Physiology	4

Students must take one of the following two courses:

EPRE 345 Educational Psychology	3
PSY 120 Principles of Psychology	4

Notes

Clinical experience of 1500 clock-hours (minimum 2 years) under supervision of Certified Athletic Trainer at UNC is required. The number of students admitted to the clinical program is limited to available resources. Students must make a separate application to the Clinical Athletic Training Program. Admission is based on available openings, grades in related courses (minimum 2.7 GPA), experience, and interview. Additional information on the Athletic Training program is available from the program coordinator.

KINE 223 or KINE 436 can be used for the General Education requirement in Category 5.

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.

Bachelor of Arts in Kinesiology

Emphasis in Dance

Program Requirements

Complete the General Education program as outlined.....	40
Complete kinesiology core requirements.....	10
Complete the required dance courses specified here	29-30
Complete general electives to total	120

This emphasis in dance has been designed for the student who wants to prepare for a dance career in non-school settings. Students who complete this emphasis will have an integrated program in dance, kinesiology, and physical education. Students may choose to work in dance studios, health spas, recreational settings, or in professional dance troupes upon completion of this emphasis. An internship is required as part of this program.

Admission to this emphasis is by audition and interview. Students choosing this emphasis must have a 2.7 GPA before enrolling in the internship. 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 Courses — 39-40 semester hours

Kinesiology core courses — 10 semester hours

KINE 220 Anatomical Kinesiology	2
KINE 221 Mechanical Kinesiology	2
KINE 222 Physiological Kinesiology	2
KINE 223 Psychological Kinesiology	2
KINE 324 Maturational Kinesiology.....	2

Dance courses — 29-30 semester hours

PE 166 Intermediate Ballet.....	1
PE 170 Intermediate Jazz Dance	1
PE 171 Intermediate Modern Dance	1
PE 233 Advanced First Aid and CPR	2
PE 295 Beginning Dance Theory and Technique	2
PE 296 Beginning Choreography and Improvisation	2
PE 297 Intermediate Technique, Improvisation, and Composition.....	2
PE 354 Dance Performance	2
PE 453 Teaching Methods, Rhythmic Analysis, and Accompaniment.....	3
PE 454 Dance History and Philosophy.....	2
PE 455 Dance Production in High School and College	2
PE 456 Advanced Technique, Improvisation, and Composition.....	2
PE 492 Internship in Dance Leadership.....	3

Students are required to choose two of the following courses:

PE 116 Advanced Life Saving and Water Safety Instruction	3
PE 134 Self Defense	2
PE 206 A & M of Weight Training, Fitness, and Conditioning	2
PE 208 A & M of Tumbling and Gymnastics.....	2

Those individuals who want to teach dance in a school setting must obtain a teaching major, such as physical education, and must complete the Professional Teacher Education program (PTE) as outlined in this *Bulletin*.

Bachelor of Arts in Kinesiology

Emphasis in Fitness and Exercise Kinesiology

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	35
Complete program electives specified here	31
Complete general electives to total	120

This program is designed to prepare individuals to work in one or more of the following areas: 1) Preventive and Rehabilitative Exercise Programs, 2) Gerontological Fitness, 3) Fitness and Exercise Program Management, and 4) Strength and Endurance Conditioning of Athletes.

General Education

Category 3 — Physical Activity

PE 150 Jogging and Walking	1
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or

PE 152 Swimming Conditioning	1
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Category 6 — Science and Mathematics

CHEM 108 Fundamentals of General and Organic Chemistry	5
ZOO 115 Human Biology	3

Required Courses — 35 semester hours

KINE 220 Anatomical Kinesiology	2
KINE 221 Mechanical Kinesiology	2
KINE 222 Physiological Kinesiology	2
KINE 223 Psychological Kinesiology	2
KINE 324 Maturational Kinesiology	2
KINE 400 Fitness and Exercise Kinesiology Programs	2
KINE 402 Human Performance Assessment.....	2
KINE 404 Exercise, Nutrition, and Body Composition.....	3
KINE 406 Exercise Leadership and Program Management.....	3
KINE 410 Principles of Exercise Electrocardiography and Prescription.....	3
KINE 492 Internship in Fitness and Exercise Kinesiology.....	12

Elective Courses — 31 semester hours

CHEM 208 Fundamentals of Human Biochemistry	5
ET 425 Computer Applications in Education	3
KINE 380 Care and Prevention of Sports Injuries	2
KINE 390 Cardiopulmonary Resuscitation Certification.....	1
KINE 436 Sociology of Physical Activity and Sport	2
PE 206 A & M of Weight Training, Fitness, and Conditioning	2
PE 145 Activities for Stress Management.....	1
PE 153 Weight Training.....	1
PE 146 Aerobics.....	1
PSY 344 Group Process and Roles	3
REC 495 Senior Seminar	2
ZOO 245 Introduction to Human Anatomy and Physiology	4

Students are required to take one of the following courses:

BAMG 350 Management.....	3
BAMK 360 Marketing.....	3
BAFN 370 Business Finance	3

Notes

KINE 492 can be taken in 6-semester hour blocks.

KINE 223 or KINE 436 can be used for the General Education requirement in Category 5.

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.

Bachelor of Arts in Kinesiology

Emphasis in Mechanical Kinesiology

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required core courses specified here.....	15
Complete the required program courses specified here.....	27-31
Complete general electives to total	120

The course work and experiences in this major as 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 Courses — 15 semester hours

KINE 220 Anatomical Kinesiology	2
KINE 221 Mechanical Kinesiology	2
KINE 222 Physiological Kinesiology	2
KINE 223 Psychological Kinesiology	2
KINE 324 Maturational Kinesiology	2
KINE 404 Exercise, Nutrition, and Body Composition.....	3
KINE 436 Sociology of Physical Activity and Sport	2

Required Program Courses — 27-31 semester hours

KINE 331 Mechanical Analysis of Sports, Exercise, and Physical Activity	2
KINE 393 Practicum in Kinesiology	1-3
KINE 422 Directed Studies.....	1-3
MATH 124 College Algebra	3
MATH 125 Plane Trigonometry	3
MATH 127 Elementary Functions	4

CG 110 BASIC Programming.....	3
or	
CG 115 FORTRAN 77 Programming.....	3
or	
CG 120 Pascal Programming	
<i>Choose one of the following physics series</i>	
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

Recommended Courses

ANT 230 Anthropometrics	3
KINE 380 Prevention and Care of Sports Injuries	2
KINE 402 Human Performance Assessment.....	2
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

Notes

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.

KINE 223 or KINE 436 can be used for the General Education requirement in Category 5.

Bachelor of Arts in Kinesiology

Emphasis in Physical Education (K-12, K-6, 7-12)

Program Requirements

Complete the General Education program as outlined.....	40
Complete kinesiology core requirements.....	10
Complete the physical education required courses specified here.....	44-45
Complete a minor with minimum hours	18
Complete PTE program	
Complete general electives to total a minimum of	120

Students who plan to use this emphasis as a certification program for teaching physical education must complete the program of Professional Teacher Education described elsewhere in this bulletin. Students who wish to be certified 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.

A minor of at least 18 semester hours is required in this program. It is highly recommended that this be a teaching minor. It may be selected from outside or within the College of Human Performance and Leisure Studies.

Students who plan to apply for K-12 Teacher Certification in the State of Colorado must student teach at both the elementary and secondary school levels. Students who plan to apply for certification 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 Movement Fundamentals I and II, all required Analysis and Movement (A & M) 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 course work 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 Courses — 54-55 semester hours

<i>Kinesiology core courses — 10 semester hours</i>	
KINE 220 Anatomical Kinesiology.....	2
KINE 221 Mechanical Kinesiology.....	2
KINE 222 Physiological Kinesiology.....	2
KINE 223 Psychological Kinesiology.....	2
KINE 324 Maturation Kinesiology.....	2
<i>Physical Education (K-12, K-6, 7-12) courses — 44-45 semester hours</i>	
PE 204 Movement Fundamentals I.....	2
PE 205 Movement Fundamentals II.....	2
Note — Students must pass basic competency examinations in PE 204 and PE 205. A student must achieve competency in PE 204 before taking PE 205.	
PE 206 A & M of Weight Training, Fitness, and Conditioning.....	2
PE 207 A & M of Individual Sports.....	2
PE 209 A & M of Folk and Square Dance.....	2
Note — Students must pass basic competency examinations in either PE 206 or PE 209.	

Students are required to take 4 of the following team sport activities:

PE 215 A & M of Basketball.....	2
PE 216 A & M of Football.....	2
PE 217 A & M of Soccer.....	2
PE 218 A & M of Softball.....	2
PE 219 A & M of Volleyball.....	2
Note — Students must pass basic competency examination in two team sport A & M classes.	

Students are required to take 3 of the following individual sport activities:

PE 116 Advanced Life Saving and Water Safety Instruction.....	3
PE 208 A & M of Tumbling and Gymnastics.....	2
PE 226 A & M of Racquet Sports.....	2
PE 227 A & M of Track and Field.....	2
PE 228 A & M of Wrestling.....	2
PE 230 A & M of Self-Defense.....	2
Note — Students must pass basic competency examination in one individual A & M class.	

Students must complete 1 of the following coaching and officiating courses:

PE 312 Coaching and Officiating Baseball.....	3
PE 313 Coaching and Officiating Basketball.....	3
PE 314 Coaching and Officiating Football.....	3
PE 315 Coaching and Officiating Gymnastics.....	3
PE 316 Coaching and Officiating Tennis.....	3
PE 317 Coaching and Officiating Track and Field.....	3
PE 318 Coaching and Officiating Soccer.....	3
PE 319 Coaching and Officiating Softball.....	3
PE 320 Coaching and Officiating Swimming.....	3
PE 321 Coaching and Officiating Volleyball.....	3
PE 322 Coaching and Officiating Wrestling.....	3

Students must take the following 4 courses that make up the Professional Methods Block concurrently and at UNC. Students must be accepted into PTE before taking the Methods Block courses.

PE 344 Clinical Experiences in Teaching PE.....	3
PE 345 Teaching Methodology in Elementary PE.....	2
PE 346 Teaching Methodology in Secondary PE.....	2
PE 347 Tests and Measurements in PE.....	2
Note — PE 344 is a PTE course and is not included in the 44-45 hour emphasis.	

Students are required to complete each of the courses listed below:

KINE 380 Prevention and Care of Sports Injuries.....	2
PE 202 Introduction to Physical Education.....	1
PE 203 Introduction to Coaching.....	1
PE 233 Advanced First Aid and CPR.....	2
PE 432 Adapted Physical Education.....	3
PE 436 Sociological Interpretations of Physical Education and Sports.....	2
PE 461 Program Administration.....	3
Note — PE 432 is a PTE course and is not included in the 44-45 hour emphasis.	

Bachelor of Arts in Kinesiology

Emphasis in Psychological Kinesiology

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required core courses specified here.....	15
Complete the required program courses specified here.....	14
Complete the program electives specified here.....	10
Complete the general electives to total.....	120

The course work 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 psychological components of human movement.

Required Core Courses — 15 semester hours

KINE 220 Anatomical Kinesiology.....	2
KINE 221 Mechanical Kinesiology.....	2
KINE 222 Physiological Kinesiology.....	2
KINE 223 Psychological Kinesiology.....	2
KINE 324 Maturational Kinesiology.....	2
KINE 404 Exercise, Nutrition, and Body Composition.....	3
KINE 436 Sociology of Physical Activity and Sport.....	2

Required Program Courses — 14 semester hours

KINE 332 Physiological Analysis of Sports, Exercise and Physical Activity.....	2
or	
KINE 331 Mechanical Analysis of Sports, Exercise, and Physical Activity.....	2
KINE 333 Psychological Analysis of Sports, Exercise and Physical Activity.....	2
KINE 422 Directed Studies.....	3
or	
KINE 415 Senior Research Project.....	3
PSY 120 Principles of Psychology.....	4
PSY 240 Principles of Learning.....	3

Program Electives — 10 semester hours from the following

KINE 216 Computer Applications in Kinesiology.....	2
PSY 230 Human Growth and Development.....	4
PSY 340 Cognition.....	3
PSY 265 Social Psychology.....	3
PSY 400 Research Design and Analysis.....	5
PSY 443 Motivation.....	3
PSY 480 Physiological Psychology.....	5

Notes

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.

KINE 223 or KINE 436 can be used for the General Education requirement in Category 5.

Bachelor of Arts in Kinesiology

Emphasis in Sociological Kinesiology

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required core courses specified here.....	15
Complete the required program courses specified here.....	16
Complete the program electives specified here.....	9
Complete the general electives to total.....	120

The course work 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 sociological components of human movement.

Required Core Courses — 15 semester hours

KINE 220 Anatomical Kinesiology.....	2
KINE 221 Mechanical Kinesiology.....	2
KINE 222 Physiological Kinesiology.....	2
KINE 223 Psychological Kinesiology.....	2
KINE 324 Maturational Kinesiology.....	2
KINE 404 Exercise, Nutrition, and Body Composition.....	3
KINE 436 Sociology of Physical Activity and Sport.....	2

Required Program Courses — 16 semester hours

KINE 333 Psychological Analysis of Sports, Exercise, and Physical Activity.....	2
KINE 332 Physiological Analysis of Sports, Exercise, and Physical Activity.....	2
or	
KINE 331 Mechanical Analysis of Sports, Exercise, and Physical Activity.....	2

KINE 422 Directed Studies.....	3
or	
KINE 415 Senior Research Project.....	3
SOC 100 Principles of Sociology.....	3
SOC 170 Social Problems.....	3
SOC 351 Social Theory I.....	3

Program Electives — 9 semester hours from the following

SOC 120 Marriage and the Family.....	3
SOC 237 Sociology of Minorities.....	3
SOC 221 Sociology of Sex Roles.....	3
SOC 235 Social Change.....	3
SOC 247 Social Deviance.....	3
SOC 330 Social Organization.....	3
SOC 332 Social Psychology.....	3
SOC 333 Social Class and Inequality.....	3
SOC 352 Social Theory II.....	3
SOC 360 Computer Applications in the Social Sciences.....	3
SOC 361 Social Research.....	3
SOC 362 Social Statistics.....	3
SOC 373 Political Sociology.....	3

Notes

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.

KINE 223 or KINE 436 can be used for the General Education requirement in Category 5.

Master of Arts in Physical Education

Emphasis in Adapted Physical Education

Program Requirements

Complete the required courses specified here.....	26-32
Complete the program electives.....	4

Required Courses — 26-32 semester hours

PE 538 PE for Mentally Impaired	2
PE 539 PE for Physically Handicapped	2
PE 541 Motor Assessment & Prescription	2
PE 602 Introduction to Research in Physical Education, Recreation and Kinesiology	3
PE 612 Measurement of Human Performance.....	3
PE 641 Advanced Elementary Physical Education	3
PE 680 Perspectives in Physical Education	3
PE 692 Graduate Internship in PE	2-8

Students must select one of the following courses

PE 614 Analysis of Teaching Physical Education.....	3
PE 640 Curriculum in Physical Education.....	3
PE 688 Physical Education and the Law	3

Students must select one of the following courses

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology	3
KINE 623 Advanced Physiological Kinesiology	3
KINE 624 Advanced Maturational Kinesiology.....	3
KINE 626 Advanced Physiological Kinesiology	3

Elective Courses — 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.

Master of Arts in Physical Education

Emphasis in Administration

Program Requirements

Complete the required courses specified here.....	27
Complete program electives	3

The Master of Arts Program in the Physical Education and Dance Department 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 Courses — 27 semester hours

PE 550 Program Management in HPLS	3
PE 576 Sport Promotion and Marketing.....	3
PE 602 Introduction to Research in Physical Education, Recreation, and Kinesiology	3
PE 612 Measurement of Human Performance.....	3
PE 640 Curriculum in Physical Education.....	3
PE 660 Administrative Interrelationships in HPLS	3
PE 680 Perspectives in PE and Sport.....	3
PE 688 Legal Aspects of HPLS.....	3

Students must select one of the following courses:

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology.....	3
KINE 623 Advanced Psychological Kinesiology.....	3
KINE 624 Advanced Maturational Kinesiology.....	3
KINE 626 Advanced Physiological Kinesiology.....	3

Elective Courses — 3 semester hours

Electives are to be based on program and career goals and must be related to the study of administration. Must have approval of advisor.

Master of Arts in Physical Education

Emphasis in Coaching

Program Requirements

Complete the required courses specified here.....	27
Complete program electives	4

The Master of Arts Program in the Physical Education and Dance Department 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 Courses — 27 semester hours

KINE 580 Advanced Care and Prevention of Sports Injuries	2
KINE 670 Sociology of Sport and PE	3
PE 550 Program Management in HPLS	3
PE 602 Introduction to Research in Physical Education, Recreation, and Kinesiology	3
PE 612 Measurement of Human Performance	3
PE 680 Perspectives in Physical Education and Sport	3
PE 688 Legal Aspects of HPLS	3

Students must take one of the following courses:

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology	3
KINE 623 Advanced Psychological Kinesiology	3
KINE 624 Advanced Maturational Kinesiology	3
KINE 626 Advanced Physiological Kinesiology	3

Students must select two of the following courses:

KINE 635 Seminar of Sports Psychology	2
KINE 636 Seminar of Sports Mechanics	2
KINE 637 Seminar of Sports Physiology	2

Elective Courses — 4 semester hours

Electives related to emphasis area and career goals. Must have approval of advisor.

Note

PE 692, Internship, is recommended to be taken as an elective.

Master of Arts in Physical Education

Emphasis in Kinesiology

Program Requirements

Complete the required courses specified here.....	21
Complete program electives	10

The Master of Arts in Physical Education is offered jointly through the Department of Kinesiology and the Department of Physical Education and Dance.

Required Courses — 21 semester hours

KINE 670 Sociology of Sport and Physical Education	3
PE 602 Introduction to Research in Physical Education, Recreation and Kinesiology	3
PE 612 Measurement of Human Performance	3

Students are required to take four of the following courses:

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology	3
KINE 623 Advanced Psychological Kinesiology	3
KINE 624 Advanced Maturational Kinesiology	3
KINE 626 Advanced Physiological Kinesiology	3

Elective Courses — 10 semester hours

Electives must be selected in a concentration area with the approval of the advisor.

Note

Concentrations are available in Physiological, Psychological, Mechanical, Sociological, Sports, and Dance Kinesiology. Contact the Chairperson of the Department of Kinesiology for specific course requirements and recommended electives.

Master of Arts in Physical Education

Emphasis in Preventive and Rehabilitative Exercise

Program Requirements

Complete the required courses specified here.....	26
Complete program electives	9

This program is based on the certification requirements of the American College of Sports Medicine.

Required Courses — 26 semester hours

KINE 670 Sociology of Sport and Physical Education	2
KINE 592 Internship	3
PE 602 Introduction to Research in Physical Education, Recreation and Kinesiology	3
PE 612 Measurement of Human Performance	3

Select two of the following courses:

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology	3
KINE 623 Advanced Psychological Kinesiology	3
KINE 624 Advanced Maturational Kinesiology	3
KINE 626 Advanced Physiological Kinesiology	3

Select three of the following courses:

KINE 500 Preventive and Rehabilitative Exercise Programs	2
KINE 502 Human Performance Assessment	2
KINE 504 Exercise, Nutrition, and Body Composition	3
KINE 506 Exercise Leadership and Program Management	3
KINE 510 Principles of Exercise ECG and Prescription	3

Electives Courses — 9 semester hours

Electives must be selected with the consent of the advisor

Note

Contact the Chairperson of the Department of Kinesiology for additional information about this program and recommended electives.

Master of Arts in Physical Education

Emphasis in Teaching

Program Requirements

Complete the required courses specified here.....	26
Complete program electives	4

The Master of Arts Program in the Physical Education and Dance Department 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 Courses — 26 semester hours

PE 602 Introduction to Research in Physical Education, Recreation and 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
PE 641 Advanced Elementary Physical Education	3
PE 680 Perspectives in Physical Education	3
PE 688 Legal Aspects of HPLS.....	3

Students must select one of the following courses:

KINE 620 Advanced Anatomical Kinesiology	3
KINE 621 Advanced Mechanical Kinesiology.....	3
KINE 623 Advanced Psychological Kinesiology	3
KINE 624 Advanced Maturational Kinesiology.....	3
KINE 626 Advanced Physiological Kinesiology.....	3

Students must select one of the following courses:

KINE 635 Seminar In Sports Psychology	2
KINE 636 Seminar in Sports Physiology	2
KINE 637 Seminar in Sports Mechanics.....	2

Elective Courses — 4 semester hours

Electives are to be based upon program and career goals and must be related to the study of teaching. Must have approval of advisor.

Doctor of Education in Physical Education

Emphasis in Administration

Program Requirements

Complete the required courses specified here.....55
 Complete program electives 10

Students who choose to obtain the doctoral degree in the Department of Physical Education and Dance may choose an emphasis in Pedagogy or Administration. Other emphases in this area may be obtained in the Kinesiology Department. Please see details for those emphases elsewhere in this *Bulletin*.

This degree has been designed to provide students with a sound research background that is integrated with the emphases areas of pedagogy and administration. 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.

Prerequisites

Students will be required to have completed a graduate course in each of the following kinesiology areas before enrolling in the Ed.D. program with emphasis in Pedagogy or Administration OR they must take the courses as part of their program of study:

- KINE 620 Advanced Anatomical Kinesiology
- KINE 621 Advanced Mechanical Kinesiology
- KINE 623 Advanced Psychological Kinesiology
- KINE 624 Advanced Maturational Kinesiology
- KINE 626 Advanced Physiological Kinesiology

Required Courses — 55 semester hours

EDAD 610 School Finance and Budgeting.....	3
EDAD 641 Seminar in Decision-Theory.....	3
EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
KINE 670 Sociology of Sport and Physical Education.....	3
KINE 672 History of Physical Education and Sport.....	3
PE 550 Program Management in Human Performance and Leisure Studies	3
PE 576 Sport Promotion and Marketing.....	3
PE 640 Curriculum in Physical Education.....	3
PE 660 Administrative Interrelationships in HPLS	3
PE 688 Legal Aspects of HPLS.....	3
PE 703 Research Seminar in Human Performance	3
PE 797 Doctoral Research Proposal	4
PE 799 Doctoral Dissertation.....	12
REC 675 Areas and Facilities in Physical Education and Recreation	3

Elective Courses — 10 semester hours

Electives are to be based upon program and career goals and must be related to the study of administration. Must have approval of advisor.

Doctor of Education in Physical Education

Emphasis in Kinesiology

Program Requirements

Complete the required courses specified here.....31-32
 Complete program electives34

The Doctor of Education in Physical Education is offered jointly through the Department of Kinesiology and the Department of Physical Education and Dance. The following concentration areas are offered by the Department of Kinesiology to students pursuing this degree: Physiological Kinesiology, Psychological Kinesiology, Mechanical Kinesiology, and Sociological Kinesiology.

Prerequisites

The following kinesiology courses or their equivalents are required as prerequisites to KINE 690: Problems of Human Movement. ("Equivalent" indicates a student possesses and can demonstrate the necessary knowledge and competencies acquired through previous course work, independent study, or experience.) Competency examinations are required for the demonstration of an equivalence.

- KINE 620 Advanced Anatomical Kinesiology
- KINE 621 Advanced Mechanical Kinesiology
- KINE 623 Advanced Psychological Kinesiology
- KINE 624 Advanced Maturational Kinesiology
- KINE 626 Advanced Physiological Kinesiology

Required Courses — 31-32 semester hours

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
KINE 625 Laboratory Techniques in Kinesiological Research.....	3
or	
SOC 660 Seminar in Advanced Social Research	4
Note — The student's program advisor shall determine which research course (KINE 625 or SOC 660) will be required.	
KINE 670 Sociology of Sport and Physical Education.....	3
KINE 690 Problems of Human Movement.....	3
KINE 797 Doctoral Proposal Research	4
KINE 799 Doctoral Dissertation	12

Elective Courses — 34 semester hours

Selected with the consent of advisor and to be completed in concentration area.

Note

Specific requirements for each concentration area may be obtained from the Chairperson of the Department of Kinesiology.

Doctor of Education in Physical Education

Emphasis in Pedagogy

Program Requirements

Complete the required courses specified here.....50
 Complete program electives 15

Students who choose to obtain the doctoral degree in the Department of Physical Education and Dance may choose an emphasis in Pedagogy or Administration. Other emphases in this area may be obtained in the Kinesiology Department. Please see details for those emphases elsewhere in this *Bulletin*.

This degree has been designed to provide students with a sound research background that is integrated with the emphases areas of pedagogy and administration. 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.

Prerequisites

Students will be required to have completed a graduate course in each of the following kinesiology areas before enrolling in the Ed.D. program with emphasis in Pedagogy or Administration OR they must take the courses as part of their program of study:

- KINE 620 Advanced Anatomical Kinesiology
- KINE 621 Advanced Mechanical Kinesiology
- KINE 623 Advanced Psychological Kinesiology
- KINE 624 Advanced Maturation Kinesiology
- KINE 626 Advanced Physiological Kinesiology

Required Courses — 50 semester hours

EPRE 602 Elements of Statistics.....	3
EPRE 603 Analysis of Variance.....	3
KINE 670 Sociology of Sport and Physical Education.....	3
KINE 672 History of Physical Education and Sport.....	3
PE 614 Analysis of Teaching in Physical Education.....	3
PE 640 Curriculum in Physical Education.....	3
PE 641 Advanced Elementary Physical Education.....	3
PE 660 Administrative Interrelationships.....	3
PE 688 Legal Aspects of HPLS.....	3
PE 695 Seminar in Physical Education.....	2
PE 703 Research Seminar in Human Performance.....	3
PE 797 Doctoral Research Proposal.....	4
PE 799 Doctoral Dissertation.....	12

Note — PE 695 is a 2 hour class that must be taken twice.

Elective Courses — 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.

Bachelor of Science in Recreation

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	36
Complete a minor with minimum hours	18
Complete general electives to total	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 knowledges of a variety of recreation settings. All students are required to satisfactorily complete the major core. 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 to choose from. Numerous local, state, federal, and private agencies participate with the Department in this program. 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 an overall GPA of 2.5 before beginning their internship. Grade of "C" or higher required in Recreation classes.

All students must have a minor or emphasis of 18 or more hours or 18 hours of supporting courses selected with the approval of their major advisor. Students must have a current First Aid and CPR certificate before internship.

Required Courses — 36 semester hours

REC 203 Introduction to Recreation and Leisure	3
REC 204 Introduction to Therapeutic Recreation.....	3
REC 252 Social Recreation	2
REC 265 Recreation Skills.....	3
REC 369 Management of Recreation Facilities.....	2
REC 451 Administration of Leisure Delivery Systems	3
REC 452 Internship in Recreation	12
REC 468 Programs in Recreation.....	3
REC 472 Recreation Leadership.....	3
REC 495 Senior Seminar	2

Bachelor of Science in Recreation

Emphasis in Recreation Administration

Program requirements

Complete the General Education program as outlined.....	40
Complete the required Recreation major courses specified here.....	36
Complete the emphasis area courses specified here.....	24
Complete general electives to total	120

Required Courses — 36 semester hours

REC 203 Introduction to Recreation and Leisure	3
REC 204 Introduction to Therapeutic Recreation.....	3
REC 252 Social Recreation	2
REC 265 Recreation Skills.....	3
REC 369 Management of Recreation Facilities.....	2

REC 451 Administration of Leisure Delivery Systems	3
REC 452 Internship in Recreation	12
REC 468 Programs in Recreation.....	3
REC 472 Recreation Leadership.....	3
REC 495 Senior Seminar	2

Emphasis Area — 24 semester hours

BAMG 350 Management.....	3
BAMG 453 Human Resource Management	3
JMC 380 Public Relations	3
PE 464 Legal Issues in Human Performance and Leisure Studies	3
Electives in emphasis	12

Bachelor of Science in Recreation

Emphasis in Therapeutic Recreation

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required Recreation major courses specified here.....	36
Complete the emphasis area courses specified here.....	24
Complete general electives to total	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 knowledges of a variety of recreation settings. Students who complete the Therapeutic Recreation emphasis will be prepared to work with individuals with handicapping conditions in community, clinical, and non-teaching school settings. The emphasis includes a wide variety of hands-on experiences with individuals from a variety of community and school settings with differing forms of handicapping conditions. 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 to choose from. Numerous local, state, federal, and private agencies participate with the department in this program. 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 an overall GPA of 2.5 before beginning their internship. Grade of "C" or better required in Recreation classes.

Many agencies require employees to possess certification. Standards are set by the National Council for Therapeutic Recreation Certification. Students are urged to check with their advisor to obtain current certification information.

Required Courses — 36 semester hours

REC 203 Introduction to Recreation and Leisure	3
REC 204 Introduction to Therapeutic Recreation.....	3
REC 252 Social Recreation	2
REC 265 Recreation Skills.....	3
REC 369 Management of Recreation Facilities	2
REC 451 Administration of Leisure Delivery Systems	3
REC 468 Programs in Recreation.....	3
REC 472 Recreation Leadership.....	3
REC 452 Internship in Recreation	12
REC 495 Senior Seminar	2

Emphasis Area — 24 semester hours

KINE 220 Anatomical Kinesiology.....	2
PSY 230 Human Growth and Development	4
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 for Special Populations.....	3

Electives related to emphasis.....	6
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Master of Arts in Recreation

Emphasis in Recreation Administration

Program Requirements

Complete the required courses specified here.....	18
Complete program electives	12

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.

Students who choose this degree may also select an emphasis in therapeutic recreation that leads to certification in this area.

Required Courses — 18 semester hours

PE 602 Introduction to Research in Physical Education, Recreation, and Kinesiology	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 Courses — 12 semester hours

Appropriate with student career goals. Approval by advisor required.

Master of Arts in Recreation

Emphasis in Therapeutic Recreation

Program Requirements

Complete the required courses specified here.....	30
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This specialized recreation emphasis will prepare students to work in administrative positions in settings whose primary focus is upon individuals with handicapping conditions. Leisure and Recreation is a focal point for private and public institutions who work with special populations and students who complete this degree are prepared to work efficiently in these settings.

Required Courses — 30 semester hours

PE 602 Introduction to Research in Physical Education, Recreation, and Kinesiology	3
REC 515 Clinical Aspects of Therapeutic Recreation	3
REC 516 Procedures and Techniques of Therapeutic Recreation	3
REC 521 Contemporary Problems in Therapeutic Recreation	3

REC 526 Seminar in Recreation Program Development for Special Populations	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

Note

Students who wish to seek certification through the National Council for Therapeutic Recreation Certification (NCTRC) need to have completed a minimum of a 360-hour, 10 consecutive week internship in a clinical, residential, or community-based therapeutic recreation program under an agency supervisor who is certified by NCTRC at the Therapeutic Recreation Specialist Professional level.

Minor in Aerospace Studies: 20 semester hours

General Military Courses — 8 semester hours

AS 101 The Air Force Today I	2
AS 102 The Air Force Today II	2
AS 201 Development of Air Power I	2
AS 202 Development of Air Power II	2

Professional Officer Courses — 12 semester hours

AS 301 Air Force Leadership and Management I	3
AS 302 Air Force Leadership and Management II	3
AS 401 National Security Forces in Contemporary American Society I	3
AS 402 National Security Forces in Contemporary American Society II	3

Notes

Students completing the six-week Field Training Course will receive up to eight hours of transfer credit for the General Military Course courses.

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: 21-36 semester hours

Required Courses — 13 semester hours

HIST 250 War in Historical Perspective: Topics	3
MS 311 Leadership Assessment	3
MS 321 Applied Leadership	3
MS 401 Staff Functions and Leadership Principles	1
MS 421 Role and Ethics of the Officer	3

Elective Courses — 8 semester hours

MS 111 Introduction to Military Skills I	2
MS 121 Introduction to Military Skills II	2
MS 211 Contemporary Management Principles	2
MS 221 Dynamics of Military Operations	2
MS 287 Introduction to Military Leadership and Operations	8
MS 387 Practicum in Military Operations	8
Note — Select either MS 111, MS 121, MS 211, MS 221 sequence or MS 287 or MS 387.	
Complete 3 additional courses approved by the Professor of Military Science	6-15

Notes

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

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

Minor in Physical Education — Coaching: 27-28 semester hours

Required Courses — 27-28 semester hours

KINE 220 Anatomical Kinesiology	2
KINE 322 Physiological Analysis of Sports Exercise and Physical Activity	2
KINE 333 Psychological Analysis of Sports Exercise and Physical Activity	2
KINE 380 Prevention and Care of Sports Injuries	2
PE 203 Introduction to Coaching	1
PE 206 A & M of Weight Training, Fitness, and Conditioning	2
PE 335 Sports Pedagogy	2
PE 392 Internship	1
PE 461 Program Administration	3

Students must select two of the following courses:

PE 116 Advanced Life Saving and Water Safety Instruction	3
PE 208 A & M of Tumbling and Gymnastics	2
PE 215 A & M of Basketball	2
PE 216 A & M of Football	2
PE 217 A & M of Soccer	2
PE 218 A & M of Softball	2
PE 219 A & M of Volleyball	2
PE 220 A & M of Baseball	2
PE 226 A & M of Tennis	2
PE 227 A & M of Track and Field	2
PE 228 A & M of Wrestling	2

Students must select two of the following in the same activities that were chosen for the A & M classes:

PE 312 Coaching and Officiating Baseball	3
PE 313 Coaching and Officiating Basketball	3
PE 314 Coaching and Officiating Football	3
PE 315 Coaching and Officiating Gymnastics	3
PE 316 Coaching and Officiating Tennis	3
PE 317 Coaching and Officiating Track and Field	3
PE 318 Coaching and Officiating Soccer	3
PE 319 Coaching and Officiating Softball	3
PE 320 Coaching and Officiating Swimming	3
PE 321 Coaching and Officiating Volleyball	3
PE 322 Coaching and Officiating Wrestling	3

Note

The coaching minor has been designed as a non-teaching minor to prepare students to assume coaching roles in school and non-school settings. Specific attention has been paid to certification standards that have been developed by the National Association of Physical Education and Sport (NASPE) and the National Association of Girls and Women's Sport (NAGWS).

Minor in Dance: 20 semester hours

Required Courses — 20 semester hours

KINE 220 Anatomical Kinesiology	2
PE 166 Intermediate Ballet Dance	1
PE 170 Intermediate Jazz Dance	1
PE 171 Intermediate Modern Dance	1
PE 295 Beginning Dance Theory and Technique	2
PE 296 Beginning Choreography and Improvisation	2
PE 297 Intermediate Technique, Improvisation, and Composition	2
PE 453 Teaching Methods, Rhythmic Analysis, and Accompaniment	3
PE 454 Dance History and Philosophy	2
PE 455 Dance Production in High School and College	2
PE 456 Advanced Technique, Improvisation, and Composition	2

Note

The dance minor focuses on the development of skills and teaching strategies that will enhance the student's ability to teach 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.

Minor in Physical Education (K-12) Teaching: 25 semester hours

Required Courses — 25 semester hours

KINE 222 Physiological Kinesiology	2
PE 203 Introduction to Coaching	1
PE 204 Movement Fundamentals I	2
PE 205 Movement Fundamentals II	2
PE 206 A & M of Weight Training, Fitness, and Conditioning	2
Students are required to take two of the following individual sport activity courses:	
PE 208 A & M of Tumbling and Gymnastics	2
PE 209 A & M of Folk and Square Dance	2
PE 226 A & M of Tennis	2
PE 227 A & M of Track and Field	2
PE 228 A & M of Wrestling	2

Students are required to take two of the following team sport activity courses:

PE 215 A & M of Basketball	2
PE 216 A & M of Football	2
PE 217 A & M of Soccer.....	2
PE 218 A & M of Softball	2
PE 219 A & M of Volleyball	2
PE 230 A & M of Self Defense	2

Students must take one of the following courses:

KINE 220 Anatomical Kinesiology	2
KINE 221 Mechanical Kinesiology.....	2
KINE 223 Psychological Kinesiology	2
KINE 324 Maturational Kinesiology.....	2
PE 436 Sociological Interpretations in Physical Education and Sport.....	2

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 Teaching Methodology in Elementary Physical Education.....	2
PE 346 Teaching Methodology in Secondary Physical Education	2
PE 347 Tests and Measurements in Physical Education.....	2

Note — PE 344 is a PTE course and is not included in the 25 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, coaching and teaching methodology.

Students must pass basic skills competency examinations in Movement Fundamentals I and II 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, the department chair's office, and in the College of HPLS Advising Center.

Minor in Recreation: 22 semester hours

Required Courses — 22 semester hours

REC 203 Introduction to Recreation and Leisure Studies	3
REC 204 Introduction to Therapeutic Recreation.....	3
REC 252 Social Recreation	2
REC 265 Recreation Skills.....	3
REC 350 Cultural Arts in Recreation and Leisure.....	3
REC 369 Management of Recreation Facilities	2
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.

College of Performing and Visual Arts

Music and Music Education.....	221
Musical Theatre.....	233
Theatre Arts	234
Visual Arts	237
Minors	241

Location: Frasier 101
Telephone: 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 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 theater with production areas; Gray Theatre, an experimental space seating up to 125; and Foundation Hall, which seats 700 and is used primarily by the School of Music.

School of Music

Location: Frasier Hall 105
Telephone: 351-2678

Shirley Howell, Director
Gene Aitken, Associate Director
Charmaine Coppom, Music Student Services Director
Robert Ehle, Graduate Coordinator

Professors — A. Eugene Aitken, PhD; Edwin D. Baker, MM; Loren W. Bartlett, PhD; R. Evan Copley, PhD; Robert Ehle, PhD; Kenneth G. Evans, PhD; William A. Pfund, MM; Howard M. Skinner, DM; James S. Upton, PhD

Associate professors — Richard N. Bourassa, DA; Charmaine Coppom, MA; Eliza L. Daugherty, EdD; James Fittz, DMA; Richard C. Fuchs, MM; Carl Gerbrandt, DMA; Roger Greenberg, MM; Rob Hallquist, DMA; Donald L. Hamann, EdD; Errol Haun, DMA; Jack Herrick, MM; Shirley E. Howell, DA; William R. Jamieson, MA; Robin Koozer, DMA; David MacKenzie, DMA; Jack C. Robinson, MM; Kenneth Singleton, DMA; Walter G. Smith, MFA

Assistant professors — H. Gray Barrier, MM; John Bell, EdD; Kathy Bundock Moore, PhD; Debra Moree, MM; Thomas Poole, MAE; Laura Rush, DA; June Schock, MM

Approximately 350 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, woodwind techniques, conducting, and many others.

In addition, UNC possesses one of the most active summer performance programs in the Rocky Mountain region. The Summer Festival of the Arts, a definite asset for undergraduate and graduate majors, offers concentrated, pre-professional performance experience and association with outstanding guest artists, conductors and clinicians.

General objectives of the University of Northern Colorado School of Music are based on service and leadership in the arts at local, state, regional and national levels.

An integral unit within the University, the School of Music embraces the role and mission statements of the University of Northern Colorado and has designed its goals and objectives to support and enhance institutional purposes and directions. The School of Music lends considerable support through its course offerings to programs in Elementary Education, Special Education and Recreation.

The primary goal of the UNC School of Music is to develop skilled and sensitive musicians at the undergraduate, master's and doctoral levels, including performers, conductors, educators, composers, historians, theorists and administrators. The UNC School of Music maintains a two-fold objective of providing the strongest preparation possible in music education, theory and history, while encouraging the highest standards of performance.

School of Music graduates are well accepted in the professional world. UNC-prepared educators hold positions at universities, colleges, high schools, junior high and elementary schools throughout the United States and Canada. School of Music performance graduates are found in professional symphony orchestras, opera and musical theatre repertory companies, the nation's premier military ensembles, prominent freelance positions in metropolitan centers, and in professional chamber ensembles and jazz bands.

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 Chamber Winds
291/491/691 Wind Ensemble
297/497/697 Summer Festival Orchestra

Graduate Admissions

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

Location: Frasier Hall 108
Telephone: 351-2454

Thomas P. McNally, Chair

Professor — Lloyd A. Norton, MA

Associate professors — Ronald B. Gloekler, MA; Thomas McNally, MFA; Jeannette Triomphe, MA; Barrett W. Van Loo, MA

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 sponsors the annual Summer Festival of the Arts, which showcases a wide variety of cultural events, including virtually every genre of theatre along with opera and musical theatre. 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 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.

Visual Arts

Location: Guggenheim Hall

Telephone: 351-2143, 2477

Richard S. Munson, Chair

Frederic L. Myers, Coordinator of Graduate Studies

Professors — William S. Cordiner, MA; Robert B. Turner, EdD

Associate professors — Betty E. Carlisle, EdD; Michael A. Coronel, MA; Richard C. Luster, MFA; Donald A. Macfarlane, MFA; Dennis Morimoto, EdD; Richard S. Munson, PhD; Frederic L. Myers, MFA; Hyun K. Shin, MA

Assistant professors — Eugene Hoffman; Virginia Jenkins, 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.

Bachelor of Arts in Music

Emphasis in Liberal Arts

Program Requirements

Complete the music courses specified here.....	52
Complete music electives specified here.....	6
Complete foreign language requirement.....	10
Complete a minor outside of music with minimum hours.....	18
Complete General Education and electives to total.....	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 course work 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 Courses — 52 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II.....	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 201 202 Advanced Sight Singing and Theory I, II.....	6
MUS 243 244 History of Music I, II.....	6
MUS 301 18th Century Counterpoint.....	2
MUS 302 Form and Analysis.....	2
Individual Performance.....	16
Major Musical Organizations.....	8

Electives in Music — 6 semester hours

Notes

MUS 100 Recitals, Concerts, 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.

Students must take Individual Performance and Major Musical Organizations during each semester in residence.

Bachelor of Music

Emphasis in Instrumental Performance

Program Requirements

Complete the music courses specified here.....	78
Complete music electives specified here.....	8
Complete General Education and electives to total.....	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 specialists, including performers, theorists and composers, at a professional level. It also prepares them for advanced work in graduate school.

Required Courses — 78 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II.....	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 160 161 Beginning Class Piano I, II.....	2
<i>and/or</i>	
MUS 260 261 Intermediate Class Piano I, II.....	2
<i>and/or</i>	
MUS 271 471 Individual Performance in Piano.....	4
MUS 201 202 Advanced Sight Singing and Theory I, II.....	6
MUS 243 244 History of Music I, II.....	6
MUS 301 18th Century Counterpoint.....	2
MUS 302 Form and Analysis.....	2
MUS 303 Instrumentation.....	2
MUS 307 History of Instruments and Instrument Practice.....	3
MUS 319 Instrumental Techniques and Conducting.....	1

MUS 403 Acoustics of Music.....	2
MUS 426 Orchestral Excerpts: Percussion.....	2
<i>or</i>	
MUS 427 Orchestral Excerpts: Strings.....	2
<i>or</i>	
MUS 428 Orchestral Excerpts: Brass.....	2
<i>or</i>	
MUS 429 Orchestral Excerpts: Woodwinds.....	2
Major Musical Organization (Minimum).....	8
Individual Performance (Minimum).....	28

Electives in Music — 8 semester hours

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 adviser.

Woodwind Majors will take 4 hours of Small Ensemble and 4 hours of electives in consultation with an adviser.

Placement in MUS 160, 161 or 260, 261, or 271, 471 is by advisement.

MUS 100 Recitals, Concerts, 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

Emphasis in Piano

Program Requirements

Complete the music courses specified here.....	82
Complete music electives specified here.....	3
Complete General Education and electives to total.....	122

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 specialists, including performers, theorists, and composers, at a professional level or to enter graduate school in the same area of emphasis.

Required Courses — 82 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 201 202 Advanced Sight Singing and Theory I, II	6
MUS 243 244 History of Music I, II	6
MUS 301 18th Century Counterpoint.....	2
MUS 302 Form and Analysis	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 415 416 Keyboard Literature I, II.....	4
MUS 454 455 Pedagogical Approaches to Keyboard Literature I, II.....	4
Individual Performance in Piano.....	28
Major Musical Organizations.....	8

Electives in Music — 3 semester hours

Notes

Students must take Individual Performance and Major Musical Organization during each semester in residence.

MUS 100 Recitals, Concerts, 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

Emphasis in Theory and Composition

Program Requirements

Complete the required courses specified here.....	76-80
Complete music electives specified here.....	10
Complete General Education and electives to total.....	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 specialists, including performers, theorists, and composers, at a professional level. It also prepares them for advanced work in graduate school.

Required Courses — 76-80 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 160 161 Beginning Class Piano I, II.....	2
and/or	
MUS 260 261 Intermediate Class Piano I, II.....	2
and/or	
MUS 271 471 Individual Performance in Piano.....	4-12
MUS 201 202 Advanced Sight Singing and Theory I, II	6
MUS 243 244 History of Music I, II	6
MUS 277 477 Individual Instruction in Composition	16
MUS 301 18th Century Counterpoint.....	2
MUS 302 Form and Analysis	2
MUS 303 Instrumentation	2

MUS 319 Instrumental Techniques and Conducting.....	1
MUS 323 Choral Techniques and Conducting	2
MUS 403 Acoustics of Music.....	2
MUS 422 Directed Studies (Form and Analysis)	3
MUS 422 Directed Studies (Electronic Music)	3
MUS 422 Directed Studies (Pedagogy of Theory)	3
Major Musical Organizations.....	8

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, 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.

Bachelor of Music

Emphasis in Voice

Program Requirements

Complete the required courses specified here.....	84
Complete Foreign Language Requirement	18
Complete General Education and electives to total.....	131

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 specialists, including performers, theorists and composers, at a professional level. It also prepares them for advanced work in graduate school.

Required Courses — 84 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 201 202 Advanced Sight Singing and Theory I, II	6
MUS 243 244 History of Music I, II	6
MUS 301 18th Century Counterpoint.....	2
MUS 302 Form and Analysis	2
MUS 160 161 Beginning Class Piano I, II.....	2
and/or	
MUS 260 261 Intermediate Class Piano I, II.....	2
and/or	
MUS 271, 471 Individual Performance in Piano.....	4-8

MUS 285, 485 Performance in Opera Theatre	4
and/or	
MUS 286, 486 Scene Studies in Opera	1-3
MUS 323 Choral Technique 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

Notes

Placement in MUS 160, MUS 161 or MUS 260, MUS 261 or MUS 271, MUS 471 is by advisement. Four semesters required.

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, 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 and Bachelor of Music Combined

Emphasis in Instrumental or Voice

Program Requirements

Complete requirement for Bachelor of Music degree (listed previously).....	79
Complete the required courses specified here.....	29
Complete the PTE program	
Complete General Education and electives to total a minimum of ...	170

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 certification to teach at the elementary or secondary levels.

Required Courses — 29 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 307 History of Instruments and Instrumental Practice.....	3
MUS 403 Acoustics of Music.....	2
Individual Performance (Additional)	14
Ensembles and/or Electives by advisement (Additional)	10

Notes

Complete 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.

Bachelor of Music Education

Emphasis in Instrumental Music

Program Requirements

Complete the music courses specified here.....	74
Complete music electives specified here.....	6
Complete PTE program	
Complete General Education and electives to total a minimum of ...	142

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 certification to teach at the elementary or secondary levels.

Required Courses — 74 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 163 164 Beginning Strings I, II	2
MUS 201 202 Advanced Sight Singing and Theory I, II	6
MUS 210 Introduction to Music Education	1
MUS 243 244 History of Music I, II	6
MUS 301 18th Century Counterpoint.....	2
and/or	
MUS 302 Form and Analysis	2
and/or	
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 Orch/String Literature, Pedagogy and Conducting	2
MUS 325 Choral Methods and Literature for Elementary and Secondary Schools	1
MUS 356 357 Marching Band Techniques I, II	2
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

Music Electives — 6 semester hours

To be selected from the following:

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, 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.

Students must choose two of the following three classes: MUS 301, MUS 302, or MUS 303.

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 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 a 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.

Bachelor of Music Education

Emphasis in Vocal, Piano and General Music Education

Program Requirements

Complete the music courses specified here.....	71-75
Complete music electives specified here.....	11
Complete PTE program	
Complete General Education and electives to total a minimum of	144-148

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 certification to teach at the elementary and secondary levels.

Required Courses — 71-75 semester hours

MUS 100 Recitals, Concerts, Productions.....	0
MUS 101 102 Sight Singing and Theory I, II	8
MUS 141 142 Music Literature and Styles I, II.....	4
MUS 160 161 Beginning Class Piano I, II (Vocal Majors)	2
and/or	
MUS 260 261 Intermediate Class Piano I, II (Vocal Majors).....	2
and/or	
MUS 271 471 Individual Performance in Piano (Vocal Majors)	4-8
MUS 163 Beginning String Instruction I.....	1
MUS 201 202 Advanced Sight Singing and Theory I, II	6
MUS 210 Introduction to Music Education	1
MUS 243 244 History of Music I, II	6
MUS 269 469 Individual Performance in Voice (Piano Majors)	6
MUS 301 18th Century Counterpoint.....	2
and/or	
MUS 302 Form and Analysis	2
and/or	
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 Guitar in the Classroom.....	1
MUS 323 Choral Techniques — 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
Electives in Music — 11 semester hours	
<i>To be selected from the following:</i>	
MUS 241 Perceiving the Arts.....	3
MUS 285 485 Performance in Opera Theatre	1-3
and/or	
MUS 286 486 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

MUS 352 353 Principles of Piano Teaching	4
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, 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.

Take two of the following courses: MUS 301, MUS 302 or MUS 303.

Junior or senior transfer students must enroll in MUS 210 during their first academic semester.

In addition to 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.

Master of Music

Emphasis in Choral Conducting

Program Requirements

Complete the required courses 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 such areas as performance, conducting, theory, composition, and 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 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 Courses — 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

Studies in Music History and Theory

Music History.....	6
Music Theory.....	6

Note — Studies in Music History and Theory will be selected by advisement based upon candidate's needs identified through advisory examination.

Recommended Electives — 4 semester hours

MUS 559 Opera and Oratorio Literature.....	2
MUS 650 Seminar: Choral Music.....	2

Note — 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.

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 covering the major area, music history and music theory, at a time approved by the major advisor.

Master of Music

Emphasis in Instrumental Performance

Program Requirements

Complete the required courses 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 such areas as performance, conducting, theory, composition, and 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 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 advisories 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 Courses — 22-23 semester hours

<i>Studies in the Major Area</i>	
MUS 600 Introduction to Musical Scholarship.....	2
MUS 693 Practicum (Recital and Correlative Paper).....	2
Individual Performance.....	8
Major Performing Organization	2
Note — String performers will participate in a major ensemble each quarter in residence.	

Master of Music

Emphasis in Music History and Literature

Program Requirements

Complete the required courses specified here.....30-32
 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 such areas as performance, conducting, theory, composition, and 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 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.

Other Studies in Music

Music History, Music Theory	6
Pedagogy	2-3

Note — Other Studies in Music will be selected by advisement based upon candidate's needs identified through advisory examination.

Elective Courses — 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.

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, alto 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 covering the major area, music history and music theory at a time approved by the major advisor.

Required Courses — 30-32 semester hours

MUS 600 Introduction to Musical Scholarship.....	2
MUS 699 Thesis	6-8
Music History	12
Music Theory Courses	6
Major Performing Organization and/or Individual Performance.....	4

Elective Courses — 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 covering the major area and music theory 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.

Master of Music

Emphasis in Theory and Composition

Program Requirements

Complete the required courses specified here.....33-35

The Master of Music degree program is designed to assist the graduate student in developing advanced professional competencies in such areas as performance, conducting, theory, composition, and 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 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 the equivalent of the undergraduate program in theory and composition as outlined in this *Bulletin*.

Required Courses — 33-35 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)	6-8
Major Performing Organization	2
<i>Studies in Music History</i>	
Music History	6

Note — 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 advisories 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 covering the major area and music history at a time approved by the major advisor.

Master of Music

Emphasis in Vocal Performance

Program Requirements

Complete the required courses 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 such areas as performance, conducting, theory, composition, and 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 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 Courses — 28-30 semester hours

<i>Studies in the Major Area</i>	
MUS 510 Vocal Pedagogy	2
<i>or</i>	
MUS 564 Problems in Teaching Voice	2
MUS 536 537, 538, 539 German Art Song I and II,	4
French/Italian Art Song, or British/American Art Song	
<i>(select two of the above art song classes)</i>	

MUS 559 Opera and Oratorio Literature	2
MUS 600 Introduction to Musical Scholarship.....	2
MUS 685 Performance in Opera Theatre	2-4
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 — Other Studies in Music will be selected by advisement based upon candidate's needs identified through advisory examination.

Elective Courses — 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.

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 covering the major area, music history and music theory at a time approved by the major advisor.

Master of Music

Emphasis in Wind/Orchestra Conducting

Program Requirements

Complete the required courses specified here.....31-33

The Master of Music degree program is designed to assist the graduate candidate in developing advanced professional competencies in such areas as performance, conducting, theory, composition, and music history and literature.

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 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 Courses — 31-33 semester hours

MUS 511 History and Literature of the Wind Band (winds)	
<i>or</i>	
MUS 512 Symphonic Repertoire (orchestral)	2
MUS 550 Score Reading and Analysis	1
MUS 580 String Techniques for the Conductor	2

or one of the following

MUS 658, 661, 662, 663 Brass Pedagogy, Percussion Pedagogy, Woodwind Pedagogy (single reed) or Woodwind Pedagogy (double reed and flute)	2-3
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MUS 600 Introduction to Musical Scholarship	2
MUS 693 Practicum in Music	2
Individual Performance in Conducting	4
Individual Performance (major instrument)	2
Major Performing Organization	2

Note — 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 (single reed), and MUS 663/Woodwind Pedagogy (double reed) are taken with advisement.

Studies in Music History and Theory

Music History	6
Music Theory	6

Note — Studies in Music History and Theory will be selected by advisement based upon candidate's needs identified through advisory examination.

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.

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 covering the major area, music history and music theory, at a time approved by the major advisor.

Master of Music Education

Program Requirements

Complete the required courses specified here.....25-27
Complete program electives specified here 6-8

The Master of Music Education degree program is designed to develop and enrich musical competencies, professional understandings and skills, and personal qualities that will allow the teacher to function in a world and in a profession of perpetual change.

The program is for the music teacher who has made a professional commitment to effective music instruction in grades K-12.

Admission

In addition to the admission requirements of the Graduate School, the student must take the Advisory Examinations in Music Education, Music History and Literature, Music Theory, and writing skills during his first quarter in residence. Students with instrumental emphases will be asked to take Advisory Examinations in Instrumental Techniques also. Applied departments may request an audition for placement purposes. Course selection for the student's plan of study will be based on results of the Advisory Examinations with considerations given to the needs of the student and the stated purpose of the degree.

Required Courses — 25-27 semester hours

Studies in the Major Area

MUS 519 Foundations of Music Education.....	3
MUS 533 Curriculum Trends in Music Education.....	3
MUS 600 Introduction to Musical Scholarship.....	2
MUS 610 Tests, Measurements and Research in Music Education.....	3

Studies in Professional Education

To be selected from the following content areas:

Multicultural Education, Educational Psychology, Educational Foundations, and Special Education 4-6

Studies in Music History, Theory, and Performance

Music History, Music Theory and Performance..... 10

Note — To be selected by advisement based upon candidate's needs identified through advisory examination.

Elective Courses — 6-8 semester hours

To be selected by advisement based upon special interests of the candidate.

Notes

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 take a written comprehensive examination at a time approved by the major advisor.

The BME degree at UNC meets all Professional Teacher Education (PTE) requirements for music teacher certification in Colorado. The MME degree is designed with the assumption that the candidate holds a valid teaching certificate. If that is not the case, and should the candidate wish to be certified in Colorado, the student should consult with the departmental advisor and the Teacher Education Center to determine course work needed for certification in the State of Colorado.

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 courses 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 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 course work may be required depending on the results of the advisory examinations.

Required Courses — 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 — 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 Courses — 11 semester hours

Notes

The hours allotted to the doctoral dissertation may be divided between performance and dissertation requirements according to the degree plan as outlined and approved by the candidate's committee. Performance and Conducting majors will perform two recitals for 8 semester hours and complete a 4 semester hour dissertation. Performance and Pedagogy majors will perform one recital for 4 semester hours and complete an 8 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.

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 courses specified here.....51
Complete program electives specified here 13

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 school and college music programs and community cultural life.

Required Courses — 51 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 Education..... 3
MUS 610 Tests, Measurements and Research in Music Education..... 3
MUS 622 Directed Study in Music Education 3
EPRE 505 Elements of Statistics..... 3
EPRE 603 ANOVA and Multiple Regression..... 3
EDF 740 Psychological Foundations of Education..... 2
EDF 785 Philosophical Foundations of Education..... 2

Secondary Emphasis

Creative Project..... 10

Elective Courses — 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 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 on-going 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 an independent 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

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	77
Complete program electives specified here	7
Complete general electives to total	124

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 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 Courses — 77 semester hours

MT 330 History of Musical Theatre.....	3
MT 360 Scene Study in Musical Theatre	2
MT 285, 485 Performance in Musical Theatre	4
MT 465 Musical Theatre Workshop	3
MUS 407 Individual Coaching in Musical Theatre.....	3
Note — MT 465 and MUS 407 must be taken concurrently	
MT 353 Musical Theatre Production.....	4
Music Performance (Vocal Ensemble).....	7
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, 161 Beginning Class Piano.....	2
MUS 260, 261 Intermediate Class Piano.....	2
MUS 270, 470 Individual Performance in Voice.....	14

MUS 486 Scene Study in Opera Theatre	2
MUS 285, 485 Performance in Opera Theatre	2
PE 166 Ballet plus 7 hours in dance technique.....	8
THEA 100 Individual Performance in Theatre	2
THEA 160 Beginning Acting.....	2
THEA 261 Stage Make-up I.....	1
THEA 270, 271 Stage Movement I, II.....	2
THEA 370, 371 Stage Movement III, IV	2

Elective Courses — 7 semester hours

Courses taken in Music, Theatre, Dance or Film with the approval of the coordinator	7
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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.
- Meet all recital and production attendance requirements.
- Complete the required courses as listed above.
- Complete 8 hours of MUS 100.
- Meet annual juried audition requirements.

MUS 141, and MUS 142 may be used as part of the 40 hours of General Education.

Students contemplating graduate work should prepare to meet the requirements of graduate study in Music. This involves preparation in the disciplinary competencies as well as research requirements to enter Graduate School.

Bachelor of Arts in Theatre Arts

Emphasis in Acting

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	50
Complete program electives specified here	2
Complete general electives to total	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 Courses — 50 semester hours

Individual Performance in Theatre.....	16
THEA 110 Development of Stagecraft.....	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting.....	2
THEA 190 Stage Speech I.....	1
THEA 191 Stage Speech II.....	1
THEA 220 Beginning Stage Costuming.....	2
THEA 240 Beginning Stage Directing	2
THEA 260 Scene Study.....	2

THEA 261 Stage Make-up I.....	1
THEA 270 Stage Movement I: Body/Mind Techniques	1
THEA 271 Stage Movement II: Period	1
THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3
THEA 361 Advanced Stage Make-up II.....	1
THEA 370 Stage Movement III: Stage Combat.....	1
THEA 371 Stage Movement IV: Mime/Pantomime.....	1
THEA 460 Advanced Acting Styles I.....	2
THEA 461 Advanced Acting Styles II.....	2
THEA 464 Audition Techniques	2

Electives in Theatre — 2 semester hours

Notes

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.

Bachelor of Arts in Theatre Arts

Emphasis in Design Technology

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	49
Complete program electives specified here	3
Complete general electives to total	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 Courses — 49 semester hours

Individual Performance in Theatre.....	16
THEA 110 Development of Stagecraft.....	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting.....	2

THEA 210 Graphics and Management	3
THEA 220 Beginning Stage Costuming.....	2
THEA 261 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 361 Advanced Stage Make-up.....	1
THEA 411 Stage Lighting	3
THEA 410 Advanced Design and Technology	3
or	
THEA 420 Advanced Costume Technical Design	3

Electives in Theatre — 3 semester hours

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.

Bachelor of Arts in Theatre Arts

Emphasis in Directing

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	48
Complete program electives specified here	2
Complete general electives to total	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 Courses — 48 semester hours

Individual Performance in Theatre.....	16
THEA 110 Development of Stagecraft.....	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting.....	2
THEA 190 Stage Speech I.....	1
THEA 191 Stage Speech II.....	1

Bachelor of Arts in Theatre Arts

Emphasis in General Theatre

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	33
Complete program electives specified here	19
Complete general electives to total	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 Courses — 33 semester hours

Core Courses

Individual Performance in Theatre.....	16
THEA 110 Development of Stagecraft.....	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting.....	2
THEA 220 Beginning Stage Costuming.....	2
THEA 261 Stage Make-up I.....	1
THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3

Electives: Choose additional 19 hours from the following courses:

MT 342 Workshop in Directing/Choreography in Musical Theatre	2
MT 360 Scene Study in Musical Theatre	2
MT 475 Music Dance Workshop.....	1

THEA 210 Graphics and Management	3
THEA 220 Beginning Stage Costuming.....	2
THEA 240 Beginning Stage Directing	3
THEA 261 Stage Make-up I.....	1
THEA 271 Stage Movement II: Period	1
THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3
THEA 371 Stage Movement IV: Stage Combat	1
THEA 440 Directing the One-Act Play	1
<i>Choose two of the following courses:</i>	
MT 342 Workshop in Directing/Choreography for Musical Theatre	2
THEA 340 Workshop in Directing I	2
THEA 341 Workshop in Directing II	2

Electives in Theatre — 2 semester hours

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.

THEA 190 Stage Speech I.....	1
THEA 191 Stage Speech II.....	1
THEA 210 Graphics and Management	3
THEA 240 Beginning Stage Directing	2
THEA 260 Scene Study.....	2
THEA 270 Stage Movement I: Body/Mind Techniques	1
THEA 271 Stage Movement II: Period	1
THEA 281 Improvisation and Creative Dramatics	2
THEA 310 Beginning Scene Design.....	3
THEA 320 Beginning Costume Design.....	3
THEA 340 Workshop in Directing I	2
THEA 341 Workshop in Directing II	2
THEA 353 Theatre Production	2
THEA 361 Advanced Stage Make-up II.....	1
THEA 370 Stage Movement III: Stage Combat.....	1
THEA 371 Stage Movement IV: Mime/Pantomime.....	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
THEA 460 Advanced Acting Styles I.....	2
THEA 461 Advanced Acting Styles II.....	2

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.

Bachelor of Arts in Theatre Arts

Emphasis in Teaching

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	53
Complete PTE program	
Complete general electives to total a minimum of	120

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 6-12.

Required Courses — 53 semester hours

Individual Performance in Theatre.....	16
MT 342 Workshop in Directing/Choreography in Musical Theatre	2
THEA 110 Development of Stagecraft.....	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting.....	2
THEA 220 Beginning Stage Costuming.....	2
THEA 261 Stage Make-up I.....	1
THEA 330 History of the Theatre I.....	3
THEA 331 History of the Theatre II.....	3
THEA 210 Graphics and Management	3
THEA 240 Beginning Stage Directing	2
THEA 281 Improvisation and Creative Dramatics.....	2
THEA 310 Beginning Scene Design.....	3

THEA 370 Stage Movement III: Stage Combat.....	1
THEA 371 Stage Movement IV: Mime/Pantomime.....	1
THEA 385 Methods of Teaching Drama	2
THEA 411 Stage Lighting	3
THEA 440 Directing the One-Act Play	1
Note — THEA 385 is a PTE requirement taken concurrently with EDLS 363	

Choose one of the following courses:

THEA 340 Workshop in Directing I	2
THEA 341 Workshop in Directing II	2

Notes

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 certification. A student desiring this certification should be prepared for many additional requirements in content and in methods and observation in the minor field.

This program meets the current certification 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.

Bachelor of Arts in Visual Arts

Emphasis in Art

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	26
Complete an area of concentration in art.....	9
Complete program electives specified here	13
Complete general electives to total	128

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.

General Education

Category 4 — Arts and Letters

MIND 181 Great Traditions of Asia: India, China or Japan	3
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Required Courses — 26 semester hours

Freshman Foundations

ART 181 History of Art I	4
ART 182 History of Art II	4
ART 183 Drawing and Design I	3
ART 184 Drawing and Design II	3
<i>Art Core I (take two courses)</i>	
ART 231 Introduction to Painting.....	3
ART 234 Interpretive Drawing.....	3

ART 252 Printmaking I	3
ART 271 Basic Photography	3
<i>Art Core II (take two courses)</i>	
ART 211 Ceramic Design	3
ART 212 Wheel Throwing	3
ART 221 Introduction to Fiber Arts	3
ART 261 Basic Sculpture	3
ART 265 Jewelry	3
At least one advanced art history course must be taken.....	4
Area of Concentration: 9 semester hours	9

Elective Courses — 13 semester hours

Notes

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.

Preparation of a professional quality slide portfolio is strongly recommended for senior art students. Consult with your advisor concerning the portfolio.

Bachelor of Arts in Visual Arts

Emphasis in Art Education

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required Art courses specified here.....	44
Complete the required art education courses.....	13
Complete area of concentration.....	9
Complete PTE program	
Complete general electives to total a minimum of.....	120

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 certification if all the requirements are satisfactorily completed.

General Education

THEA 130 Introduction to the Theatre.....	3
MUS 140 Introduction to Music.....	3
<i>Take one of the following:</i>	
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 Courses — 44 semester hours

Freshman Foundation

ART 181 History of Art I.....	4
ART 182 History of Art II.....	4
ART 183 Drawing and Design I.....	3
ART 184 Drawing and Design 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 Basic Sculpture.....	3
ART 265 Jewelry.....	3
ART 271 Basic Photography.....	3
ART 333 Life Drawing.....	3

Concentration area — 9 semester hours

Required Art Education courses for certification — 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 core courses:

EDF 364 Foundations of Education.....	4
EDF 385 Law and the Classroom Teacher.....	2
EDFE 270 Teacher Aide:.....	2
<i>1 semester hour-Elementary</i>	
<i>1 semester hour-Secondary</i>	
EDFE 444 K-12 Student Teaching.....	15
EDRD 420 Reading in the Secondary School.....	2
EDSE 410 Handicapped Students in Regular Classrooms.....	2
EPRE 345 Educational Psychology.....	3
ET 401 Instructional Technology.....	2

Notes

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, 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 course work, 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 course work. 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 certification 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 certification, 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-certification program.

Bachelor of Arts in Visual Arts

Emphasis in Graphic Arts

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required Art courses specified here.....	33
Complete the Graphic Arts area of concentration.....	15
Complete general electives.....	40
Total semester hours.....	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 Courses — 33 semester hours

Freshman Foundations

ART 181 History of Art I.....	4
ART 182 History of Art II.....	4
ART 183 Drawing and Design I.....	3
ART 184 Drawing and Design II.....	3

Core Courses

ART 231 Introduction to Painting.....	3
ART 240 Lettering.....	3
ART 261 Basic Sculpture.....	3
ART 270 Graphic Arts I.....	3
ART 333 Life Drawing.....	3
One advanced art history course.....	4

Area of Concentration (complete one) — 15 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

Elective Courses for Graphic Design — 40 semester hours to include:

ART 375 Publications Production.....	3
ART 434 Interpretive Drawing.....	3
ART 474 Graphics Studio.....	1-3
ENG 106 Word Power.....	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

Elective Courses for Photographic Communications — 40 semester hours

to include:

ART 434 Interpretive Drawing.....	3
ART 472 Photography Studio.....	3
ART 476 Advanced Black and White Photography.....	3
or	
ART 479 Color Photography — The Print.....	3

Notes

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 course work.

A professional quality portfolio is required of all graphic arts students as a placement aid.

Bachelor of Arts in Interdisciplinary Studies

Emphasis in Fine Arts

Program Requirements

Complete the General Education program as outlined.....	40
Complete the required courses specified here.....	39

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 Courses — 39 semester hours

ART 190 Art Appreciation.....	3
ENG 260 Masterpieces of World Literature: Continental European.....	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 MIND courses from those listed below

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..... 3

Participation in Music ensembles, Theatre or Music Theatre Productions or creative activities in Visual Arts..... 3

ART 490 Art Theory and Criticism..... 3

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 courses specified here	16
Complete an area of emphasis.....	12
Complete program electives	8

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 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; three letters of recommendation; an official transcript of all undergraduate and previous graduate work; 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 course work, 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 course work or areas of study before beginning the program.

Required Courses — 16 semester hours

ART 500 Contemporary Issues in Art	3
ART 600 Graduate Research in Art.....	3
ART 680 Seminar in Art History.....	4
ART 699 Thesis.....	6

Area of Emphasis — 12 semester hours

Art Emphasis	12
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Elective Courses — 8 semester hours

Art Electives	8
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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 quarter 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 Music/Liberal Arts: 21 semester hours

Required Courses — 12 semester hours

MUS 101 102 Sight Singing and Theory I, II	8
MUS 141 142 Music Literature and Styles I, II	4

Elective Courses — 9 semester hours

Note

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: 21 semester hours

Required Courses — 13 semester hours

Individual Performance in Theatre	3
THEA 110 Development of Stagecraft	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting	2
THEA 240 Beginning Stage Directing	2

Electives in Theatre Arts — 8 semester hours

Minor in Theatre Arts/Teaching: 22 semester hours

Required Courses — 22 semester hours

Individual Performance in Theatre	3
THEA 110 Development of Stagecraft	3
THEA 135 Fundamentals of Theatre	3
THEA 160 Beginning Acting	2
THEA 210 Graphics and Management	3
THEA 220 Beginning Stage Costuming	2

THEA 240 Beginning Stage Directing	2
THEA 261 Stage Make-up I	1
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 certification requirements of the North Central Association for teachers of drama.

Minor in Visual Arts: 20 semester hours

Required Courses — 13 semester hours

<i>Foundation Studies</i>	
ART 181 History of Art I	4
<i>or</i>	
ART 182 History of Art II	4
ART 183 Drawing and Design I	3
<i>or</i>	
ART 184 Drawing and Design II	3
<i>Core Courses (take two) — 6 semester hours</i>	
ART 211 Ceramic Design	3
<i>or</i>	
ART 212 Wheel Throwing	3
ART 221 Introduction to Fiber Art	3
ART 252 Printmaking I	3
ART 261 Basic Sculpture	3
ART 231 Introduction to Painting	3

Elective Courses (take at least two courses) — 7 semester hours

Elective courses can be 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.

III

Course

Descriptions





Course Prefixes

ANT	Anthropology	GEOG	Geography
ART	Visual Arts	GEOL	Geology
AS	Aerospace Studies	GER	German
AST	Astronomy	GERO	Gerontology
BA	Business Administration	HISP	Hispanic Studies
BAAC	Accounting	HIST	History
BACS	Computer Information Systems	HON	Honors Program
BAFN	Finance	HRS	Human Services
BAMG	Management	HUM	Humanities
BAMK	Marketing	ID	Interdisciplinary Studies
BIED	Biology Education	JAPN	Japanese
BIO	Biology	JMC	Journalism and Mass Communication
BLS	Black Studies	KINE	Kinesiology
BOT	Botany	MATH	Mathematics
CED	Computer Education	MED	Mathematics Education
CG	Computing, General	MET	Meteorology
CH	Community Health	MIND	Life of the Mind Program
CHED	Chemistry Education	MS	Military Science
CHEM	Chemistry	MT	Musical Theatre
CMDS	Communication Disorders	MTEC	Medical Technology
COMM	Communication	MUS	Music
CS	Computer Science	NURS	Nursing
CSPA	College Student Personnel Administration	OCN	Oceanography
ECON	Economics	PE	Physical Education and Dance
EDAD	Educational Administration	PHIL	Philosophy
EDEC	Elementary Education: Early Childhood	PHYS	Physics
EDEL	Elementary Education	PPSY	Professional Psychology
EDF	Foundations of Education	PSCI	Political Science
EDFE	Educational Field Experiences	PSY	Psychology
EDLS	Educational Field Experience: Laboratory School	REC	Recreation
EDMS	Elementary Education: Middle School	SCED	Science Education
EDRD	Elementary Education: Reading	SCI	Science
EDSE	Special Education	SOC	Sociology
EED	English Education	SOSC	Social Science
ENG	English	SPAN	Spanish
ENST	Environmental Studies	SPCO	Speech Communication
EPRE	Educational Psychology	STAT	Statistics
ESCI	Earth Sciences	TESL	Teaching English as a Second Language
ESL	English as a Second Language	THEA	Theatre Arts
ET	Educational Technology	WS	Women's Studies Program
FL	Foreign Languages	ZOO	Zoology
FND	Food, Nutrition and Dietetics		
FR	French		

Course Numbers. The University divides its courses into three 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.

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 which 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 General 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 Archeology (3) Offers a broad background in prehistoric and classical archaeology with a review of important sites around the world. Emphasis will be on anthropological interpretation of archaeological materials.

ANT 130 Human Evolution (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 Studying Cultures (3) Prerequisites: ANT 100, or ANT 110, or GEOG 100, or SOC 100, or equivalent. Introduction to fieldwork in cultural anthropology. Study techniques of learning about culture by first-hand investigation of other cultures and subcultures.

ANT 220 Archaeological Techniques (3) Prerequisites: 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) Prerequisites: ANT 100, or ANT 110, or GEOG 100, or SOC 100, or equivalent. The cultural anthropology of selected world regions (Africa, Asia, Europe, Oceania, North America). Course may be repeated to a maximum of nine credit hours under different subtitles.

ANT 311 Ethnology of Hispanic Peoples (3) Prerequisites: ANT 100, or ANT 110, or equivalent. Survey the cultures of various Hispanic populations of the New World with special emphasis on native populations of Central and South America.

ANT 312 American Indians (3) Prerequisites: ANT 100, or ANT 110, or GEOG 100, or SOC 100, or equivalent. Survey the cultures of various Native American groups in North and South America.

ANT 313 Modernization and Development (4) Prerequisites: ANT 100 or ANT 110 or GEOG 100 or SOC 100 or equivalent. Study the processes by which cultures change and modernize, focusing on economic, political, legal and symbolic concerns in developed and developing nations.

ANT 314 Sex Roles in Cultural Perspective (3) Study biologically and culturally determined gender role differences by comparing sex-related behavior in a variety of cultures.

ANT 315 Culture and the Human Lifecycle (3) A seminar in the human lifecycle from a biocultural viewpoint. Topics include reproductive behavior, pregnancy, infancy, childhood, adolescence, adulthood and old age; each taken in a comparative cultural framework.

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 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 Civilization (3) Prerequisites: ANT 100, or ANT 120, or equivalent. A comparative study of the rise of state societies throughout the world with a focus on the Near East, Africa, Asia and Europe.

ANT 324 Archaeology of Colorado and the Southwest (3) Prerequisites: ANT 100, or ANT 120, or equivalent. Study ancient cultural horizons in the Southwest up to the time of Spanish conquest emphasizing chronology, cultural change and classification of archaic cultures.

ANT 331 Human Population Biology (3) The evolutionary genetics and demographics of modern human populations.

ANT 408/508 Workshop in Anthropology (3-12) Prerequisite: Consent of the instructor. Topics in practicing anthropology. Group experiences in working on selected problems in anthropology.

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.)

ANT 470/570 Seminar in Anthropology (3) Prerequisites: ANT 100 or ANT 130 or GEOG 100 or SOC 100 or equivalent. A seminar exploring diverse topics surrounding the question of defining human nature.

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 490/590 Anthropology of Organizations (3) Prerequisite: ANT 200 or equivalent. A treatment of bureaucratic structures and cultural systems. Schools, businesses, governmental agencies and other organizations will be looked at in a cultural perspective.

ANT 492 Internship (3-12) Prerequisites: 9 hours of anthropology. Anthropological field experiences in ethnology, museology, education, government, or politics.

ANT 408/508 Workshop in Anthropology (3-12) Prerequisite: Consent of the instructor. Topics in practicing anthropology. Group experiences in working on selected problems in anthropology.

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 470/570 Seminar in Anthropology (3) Prerequisites: ANT 100 or ANT 130 or GEOG 100 or SOC 200 or equivalent. A seminar exploring diverse topics surrounding the question of defining human nature.

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 490/590 Anthropology of Organizations (3) Prerequisite: ANT 100 or equivalent. A treatment of bureaucratic structures and cultural systems. Schools, businesses, governmental agencies and other organizations will be looked at in a cultural perspective.

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.)

Visual Arts

ART 171 Introduction to Graphic Communications (3) Study methods and procedures of the major graphic reproduction processes. Fee required.

ART 181 History of Art I (4) This course is designed to give a general survey of Western art from Pre-Historic (35000 B.C.) through the Medieval Period (1400 A.D.). 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) This course is designed to give a general survey of Western art from the Proto-Renaissance (1265 A.D.) 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 Drawing and Design I (3) Co-requisite: 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 Drawing and Design II (3) Co-requisite: 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) Introduction to further enhance an understanding and appreciation of the functional and expressive nature of architecture, painting, sculpture and the applied arts. For non-majors only. Required for Elementary Education certification.

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, handbuilding 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 handbuilding 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 Interpretive Drawing (3) Prerequisites: ART 183, ART 184. Visual problem solving, stressing personal philosophy, individual interpretation, imagination, pictorial composition and thematic imagery.

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) Experience on introductory level of at least several school craft areas; clay, fibers, paper, textiles, plaster. Required for Art Education majors. Recommended for Education, Special Education and Recreation majors. 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 Basic Sculpture (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 lab for beginning to intermediate students. Design, layout and conceptual thinking for the applied graphic arts. Fee required.

ART 271 Basic Photography (3) Prerequisite: 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. No subtitle may be repeated for credit.

ART 312 Wheel Throwing (3) May be repeated once for credit. 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.

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. May be repeated twice for credit. Exploration of and rendering skills in watercolor and/or acrylic, gouache.

ART 333 Life Drawing (3) Prerequisite: ART 184. May be repeated once for credit. Fundamentals of life drawing emphasizing proportions, anatomy and aesthetic relationships. Fee required.

ART 340 Clinical Experience: K-12 Art (2) For Art Education majors. Prerequisite: Full admission to PTE or certification at the undergraduate level. 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. Consent of instructor required.

ART 344 Methods of Teaching Art in the Elementary School (1) Prerequisite: ART 190, full admission to PTE or certification at the undergraduate level. 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. Not for Art Education majors. 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. May be repeated twice for credit. 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. May be repeated twice for credit. 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. May be repeated twice for credit. Fee required.

ART 361 Sculpture II (3) Prerequisite: ART 261. May be repeated twice for credit. Basic instruction in specific sculptural processes including modeling, casting, welding, fabrication, carving, etc. Fee required.

ART 370 Graphic Arts II (3) Prerequisite: ART 270. General survey and lab 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 lab. 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 letterforms. 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 Modern Art: 1905 to Present (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) May be repeated for credit. Study special topics in the visual arts. Specific course content is determined by subtitle. No subtitle may be repeated for credit.

ART 411 Ceramic Design (3) May be repeated twice for credit. Prerequisite: ART 211. Intermediate level design of handbuilt ceramic forms. An exploration of stoneware, raku and sodium vapor firing processes. Fee required.

ART 415 Ceramic Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in ceramics. Fee required.

ART 421 Fiber Design (3) Prerequisite: ART 321. May be repeated twice for credit. Concentration on an advanced level in a selected process involving fibers. To provide more time for personal design development and expertise. 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.)

ART 423 Weaving (3) Prerequisite: ART 223. May be repeated twice for credit. Continue the study of loom weaving, particularly loom-controlled techniques. Fee required.

ART 425 Fibers Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in fibers. Fee required.

ART 431 Oil Painting (3) Prerequisite: ART 231. May be repeated twice for credit. Development of individual expression and mastery of the medium. Emphasis on appropriate use of medium toward creative ends.

ART 434 Interpretive Drawing (3) Prerequisite: ART 234. May be repeated twice for credit. Advanced work in developing an applied art philosophy, visual problem solving and thematic imagery.

ART 435 Drawing Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in drawing.

ART 436 Painting Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in painting.

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) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topic in printmaking. Fee required.

ART 460 Sculpture Studio (1-3) Prerequisites: ART 261, ART 361. May be repeated three times for credit. Self-directed studies in selected sculptural modes or processes. Fee required.

ART 461 Sculpture III (3) May be repeated twice for credit. Use of increasingly skilled or sophisticated techniques/processes with greater emphasis on idea, form and content. Fee required.

ART 464 Jewelry Studio (1-3) Prerequisite: ART 265. May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topic in jewelry. Fee required.

ART 465 Advanced Jewelry (3) Prerequisite: ART 265. May be repeated twice for credit. Extension of increasingly skilled and sophisticated techniques/processes in jewelry and metalwork. Fee required.

ART 472 Photography Studio (1-3) Prerequisite: Instructor consent required. May be repeated three times for credit. Individualized or specialized study in photography. 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. Fee required.

ART 474 Graphic Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in graphics. 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. May be repeated for credit with 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 5 credits of internship can be taken in any semester. May be repeated for credit with 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. May be repeated for credit with different subtitles.

ART 508 Workshop in Art (1-4) Art 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 the subtitle. No subtitle may be repeated for credit.

ART 512 Wheel Throwing (3) May be repeated twice for credit. 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. Fee required.

ART 513 Professional Renewal (1-4) Enhance skills and knowledge in the professional disciplines of art, art education and graphic arts. Specific course content is designated by subtitle. No subtitle may be repeated for credit.

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) May be repeated twice for credit. Advanced design techniques in fibers. Fee required.

ART 523 Weaving (3) May be repeated twice for credit. Concentrate in a selected area of weaving on an advanced design concept. Fee required.

ART 532 Watermedia Painting (3) May be repeated twice for credit. Advanced work in specific watermedia. Development of thematic imagery and personal technical skills.

ART 533 Life Drawing (3) Prerequisite: ART 333 or equivalent. May be repeated twice for credit. Advanced life drawing emphasizing development of personal interpretations of the human form. 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. May be repeated twice for credit. 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. May be repeated twice for credit. 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. May be repeated twice for credit. 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. May be repeated twice for credit. Fee required.

ART 561 Graduate Sculpture (3) May be repeated twice for credit. Self directed or assigned work in specific areas of sculpture. Advanced technical skills emphasized. 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) May be repeated for credit. Study special topics in the Visual Arts. Specific course content is determined by subtitle. No subtitle may be repeated for credit.

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) May be repeated twice for credit. Design and assembly of handbuilt ceramic forms at an advanced level. An exploration of stoneware, raku and sodium vapor firing processes. Fee required.

ART 615 Ceramic Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in ceramics. Fee required.

ART 621 Fiber Design (3) Prerequisite: ART 521. May be repeated twice for credit. Continue advanced study of techniques and design concepts in fibers. 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.)

ART 623 Weaving (3) Prerequisite: ART 523. May be repeated twice for credit. Continue advanced study of techniques and design concept in a concentrated area of weaving. Fee required.

ART 625 Fibers Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topic in fibers. Fee required.

ART 631 Oil Painting (3) Prerequisite: ART 431 or equivalent. May be repeated twice for credit. Advanced problems in oil painting. Emphasis on development of personal imagery and working in series.

ART 634 Interpretive Drawing (3) May be repeated twice for credit. Advanced work in development on thematic imagery, inventive media, unique and personal solutions to visual problems.

ART 635 Drawing Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topics in drawing.

ART 636 Painting Studio (1-3) May be repeated three times for credit. Consent of instructor required. Individualized or specialized study on specific topic in painting.

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) May be repeated for credit with different subtitles. 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.

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. May be repeated twice for credit. Fee required.

ART 654 Advanced Collagraphic Printmaking (3) Prerequisite: ART 554. Advanced collagraphic printmaking with emphasis on individual creative growth and improvement. May be repeated twice for credit. 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. May be repeated three times for credit. Fee required.

ART 660 Graduate Sculpture Studio (1-3) May be repeated three times for credit. Self-directed studies in selected sculptural modes or processes. Fee required.

ART 661 Advanced Graduate Sculpture (3) May be repeated twice for credit. Select problems in the creation of sculpture with emphasis on critical and technical competencies. Fee required.

ART 672 Photography Studio (1-3) Prerequisite: Instructor consent required. May be repeated three times for credit. Advanced individualized or specialized study in photography for graduate students. 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. May be repeated for credit with 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 5 credits of internship can be taken in any semester. May be repeated for credit with 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. A minimum of 6 semester hours of thesis must be completed.

Aerospace Studies

AS 101 The Air Force Today I (2) Study military customs and courtesies, officership, national power and the U.S. 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 air power 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.)

Astronomy

AST 100 General Astronomy (4) (3 lecture, 2 laboratory) The universe and our place in it. No mathematics background required.

AST 301 Classical Astronomy (3) (2 Lecture, 2 laboratory) Our picture of the universe based on optical observations from prehistory to 1950.

AST 302 Modern Astronomy (3) (2 lecture, 2 laboratory) The complex and violent universe revealed by radio astronomy, planetary exploration, and satellite observatories.

AST 422 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

AST 500 Survey of Astronomy (4) (3 lecture, 2 laboratory) A non-mathematical survey of contemporary astronomy emphasizing areas of current research activity.

AST 595 Special Topics in Astronomy (1-4) An opportunity to explore areas of astronomy beyond the scope of existing department offerings. Course may be repeated with different topic.

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.)

Business Administration

BA 100 American Business System (3) 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. For nonbusiness majors.

Accounting

BAAC 220 Principles of Accounting I (3) An introductory course to the principles of accounting. The accounting cycle is examined and basic accounting principles are applied to recording, classifying, and reporting of financial information for service and merchandising types of business.

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.

BAAC 320 Intermediate Accounting I (3) Prerequisite: BAAC 221 with a minimum grade of "C." Juniors and above. An activity course stressing the conceptual framework of accounting, a review of the accounting process, statement presentation of current assets and property, and plant and equipment.

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.

BAAC 323 Cost and Managerial Accounting I (3) Prerequisite: BAAC 221 with a minimum grade of "C." Juniors and above. Accumulating and analyzing financial data for management purposes. Topics include product costing, learning curve theory, cost-volume-profit relationships, and quantitative models.

BAAC 324 Cost and Managerial Accounting II (3) Prerequisite: BAAC 323 with a minimum grade of "C." Continuation of BAAC 323 — an activity course; topics include budgeting, variable costing, capital budgeting decision models, cost analysis, and quantitative models for planning and control.

BAAC 326 Governmental and Institutional Accounting (3) Prerequisite: BAAC 221 with a minimum grade of "C." Juniors and 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.

BAAC 327 Managerial Accounting (3) Prerequisite: BAAC 221. For nonaccounting majors only. Juniors and 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 are featured topics.

BAAC 328 Accounting Systems (3) Prerequisite: BAAC 321 or concurrently. An activity course designed to study transaction flow analysis of accounting information in the business environment. It encompasses the processes and procedures by which an organization's financial information is received, registered, recorded, processed, reported, and disposed.

BAAC 329 Introduction to Income Tax (3) Juniors and above. For nonaccounting majors only. No graduation credit for accounting majors. An activity course which introduces common tax rules, problem areas, and record-keeping requirements related to individuals and business.

BAAC 420 Advanced Accounting I (3) Prerequisite: BAAC 321 with a minimum grade of "C." Emphasis is on special topics including changes and error corrections, price level changes, statement of cash flows, real estate and franchises, discontinued operations, earnings per share, partnerships, and interim reporting.

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, foreign operations, and fiduciary accounting.

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.)

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.

BAAC 426 Auditing II (3) Prerequisite: BAAC 321 or concurrently and BAAC 425 with a minimum grade of "C." This is a seminar course for the study of audit procedures for specific transaction cycles. Complete a simulated audit case. Study of SEC audit requirements.

BAAC 428 Income Tax I (3) Prerequisite: BAAC 320 with a minimum grade of "C." An activity course which emphasizes individuals' tax reporting requirements. Topics include a review of tax policy, definitions of gross income, exclusions, deductions, and disposition of property.

BAAC 429 Income Tax II (3) Prerequisite: BAAC 428 with a minimum grade of "C." An activity course which 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) Prerequisite: 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 grade.

BAAC 495 Special Topics in Accounting (1-3) Prerequisite: Consent of instructor. This seminar course explores advanced topics in accounting. Special topics will be specified by the instructor.

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.)

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

BACS 100 Introduction to Computing (3) (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 205 Business Writing with Computers (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.

BACS 283 Business Microcomputer Systems (3) (Laboratory arranged) An activity course covering the application of microcomputer technology to the solution of business problems. Topics include operating systems, word processing, spreadsheets, file management, graphics, communications, internals, system implementation and management. S/U grade.

BACS 285 Structured COBOL Programming (3) (Laboratory arranged) Prerequisite: Computer Literacy. This is an activity course wherein the student will use structured design techniques to develop and analyze programs for administration/business applications using the COBOL programming language.

BACS 291 Business Statistics I (3) Prerequisites: MATH 176, Computer Literacy. Learn the use of statistics in business activities through techniques of descriptive statistics, sampling distributions, statistical estimation, and tests of hypotheses.

BACS 300 Information Systems (3) Prerequisite: Computer Literacy. Juniors and above. Topics include information systems technology, systems analysis, design, and development. Managerial informational needs to support decision making is emphasized.

BACS 305 Managerial Communications (3) (Laboratory arranged) Prerequisites: ENG 123 or BACS 205. Juniors and above. An activity course covering in-depth written and verbal communication skills and strategies required in business decision making. Use word processing, computer graphics, database information for business reports.

BACS 380 Data Communications Systems (3) (Laboratory arranged) Prerequisite: BACS 280 with a minimum grade of "C" or consent of instructor. Juniors and 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 385 Advanced Structured COBOL Programming (3) (Laboratory arranged) Prerequisite: BACS 285 with a minimum grade of "C" or consent of instructor. Juniors and above. This activity course is a continuation of BACS 285. Topics include sequential and random access processing, subroutines, character manipulation, report writer, and interactive systems.

BACS 386 Database Management Systems (3) (Laboratory arranged) Prerequisite: BACS 285 with a minimum grade of "C" or consent of instructor. Juniors and 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.

BACS 388 Systems Analysis and Design (3) (Laboratory arranged) Prerequisite: BACS 285 with a minimum grade of "C" or consent of instructor. Juniors and above. An activity course which covers systems analysis and design; emphasizes techniques, tools, skills, procedures, and end products. Covers investigation, analysis/design, implementation/installation, testing, training, and conversion activities in systems development.

BACS 390 Business Statistics II (3) (Laboratory arranged) Prerequisite: BACS 291 or equivalent. Juniors and above. This course is an activity 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.

BACS 395 Production Management (3) (Laboratory arranged) Prerequisites: BACS 291 or equivalent, BAMG 350. Juniors and above. An activity course emphasizing 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.

BACS 418 Seminar: Women in Business (2) Assess the role of women in business and the realities of the working environment. Topics include networking, power, career management and options, and negotiating styles. Juniors and above.

BACS 422 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

BACS 480 Fourth and Fifth Generation Systems (3) (Laboratory arranged) Juniors and above. An activity course addressing fourth generation languages, knowledge-based system architecture and operation, natural languages, expert system development, tools, and resulting business applications.

BACS 482 Decision Support Systems (3) (Laboratory arranged) Prerequisite: BACS 291 and course in high level programming language with minimum grade of "C," or consent of instructor. Juniors and above. An activity course analyzing quantitative techniques and decision support systems. Topics include statistical and mathematical procedures, artificial intelligence techniques and concepts, objectives of DSS, and relevant computer software.

BACS 486 Advanced Database Management (3) (Laboratory arranged) Prerequisite: BACS 386 with a minimum grade of "C" or consent of instructor. 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 488 Advanced Systems Analysis and Design (3) (Laboratory arranged) Prerequisite: BACS 388 with a minimum grade of "C." 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.

BACS 492 Internship in Computer Information Systems (1-3) Prerequisite: Consent of faculty coordinator. Obtain practical experience in one or more of the following CIS areas: programming, systems design, DBMS, quantitative research, data communications, DSS. S/U grade.

EACS 495 Special Topics in CIS (1-3)

Prerequisite: Consent of instructor. This seminar course explores advanced topics in computer information systems and/or quantitative methods.

EACS 580 Information Processing (3)

(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.

EACS 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.

EACS 622 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

EACS 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.

EACS 690 Seminar in Business Statistics

(3) (Laboratory arranged) Prerequisite: BACS 291 or BACS 590. 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

BAFN 231 Legal Environment of Business

(3) This course emphasizes public law, regulation of business, and various relationships which exist within society, government and business such as: economic regulation, social regulation, laws impacting labor-management issues, and environmental concern.

BAFN 332 Business Administration and the

Law (3) Prerequisite: BAFN 231. Juniors and above. This activity course 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.

BAFN 340 Principles of Risk and Insurance

(3) Juniors and 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.

BAFN 370 Business Finance (3)

Prerequisite: BAAC 221, BACS 291. Juniors and above. Survey basic principles and techniques of business firm financial management emphasizing financial analysis and forecasting, cash and capital budgeting, cost of capital, and sources of financing.

BAFN 371 Financial Markets and

Institutions (3) Prerequisite: BAFN 370. 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.

BAFN 372 Introduction to Real Estate (3)

Prerequisite: BAFN 370. Discover important concepts and principles of real estate, especially procedures for evaluating and appraising real estate investments, and legal marketing and financing aspects of real estate.

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.)

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.

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 445 Risk Management (3)

Prerequisite: BAFN 340 or consent of instructor. Non-speculative 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 or consent of instructor. This activity course supplies and extends the concepts and techniques of business and financial management, especially emphasizing the overall environment and decision making by financial managers. The course will utilize a case approach to many topics involving substantial student participation and extensive supervision.

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.

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.

BAFN 474 Case Problems in Financial

Management (3) Prerequisites: BACS 291 and 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.

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.

BAFN 492 Internship in Finance (1-3)

Prerequisite: Consent of faculty coordinator. Get practical experience and opportunities to utilize theory of academic finance courses. S/U grade.

BAFN 495 Special Topics in Finance (1-3)

Prerequisite: Consent of instructor. This seminar course explores advanced topics in finance.

BAFN 530 Business Law (3)

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. Course not open to students with an undergraduate business law course.

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.)

BAFN 670 Seminar in Financial

Management (3) Prerequisites: BAFN 370, 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

BAMG 350 Management (3) Juniors and above. An introduction to concepts, principles, problems, and theories of organizations and management. Examines the individual and group processes within the management functions of planning, organizing, controlling and decision making.

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, 221; BAMG 350; BAMK 360; BAFN 370. 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)
Prerequisites: Senior standing and consent of faculty coordinator. A seminar applying theories learned in all business majors to actual small businesses through this cooperative program with the Small Business Administration.

BAMG 422 Directed Studies (1-3)
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

BAMG 452 Business, Government, and Society (3) Prerequisites: BAMG 350. A seminar course studying the role of corporations in society and the relationship between business and its environment are the focus of this course. Study economic policy, social responsibility, and political influence.

BAMG 453 Human Resources Management (3) Prerequisite: BAMG 350. A seminar course to survey the principles of recruitment, selection, training, development, performance appraisal, compensation, and career development.

BAMG 454 Human Resources Development (3) Prerequisite: BAMG 350. An activity course to determine human resource needs and their acquisition and utilization in an organization including methods and theories of training and development. Simulated training and development exercise included.

BAMG 455 Industrial Relations (3)
Prerequisite: BAMG 350. An activity course to trace the labor movement, basic philosophies of different labor unions, legislation, and decisions of courts and labor boards affecting management-employee relations. Discuss current labor topics, contract negotiations and administration, grievances and disputes.

BAMG 456 Business Policies (3)
Prerequisites: BAAC 220, 221; BAFN 231, 370; BAMG 350; and senior standing. A seminar to examine organizational strategic issues and problems related to internal and external environments. Case analysis framework and strategic management concepts emphasized.

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: Senior status or permission of the instructor. A seminar course which provides a broad approach to the field of international business is taken in this course. The focus is on the functional areas of business as affected by international operations, and on the environment in which international firms operate.

BAMG 492 Internship in Management (1-3)
Prerequisites: Faculty coordinator's consent; junior or senior standing. An internship working in a middle management position to obtain practical organizational experience. Internship proposal, progress report, and final report required. S/U grade.

BAMG 495 Special Topics in Management (1-3) Prerequisites: BAMG 350, 354; or consent of instructor. A seminar in various management content areas as need and opportunity arises. Primarily for management majors, this course attempts to integrate academic management ideas into applied settings.

BAMG 550 Concepts in Management (3) A seminar to study concepts, principles, theories, and operational problems of organization and management. Examine 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.)

BAMG 650 Organizational Theory (3)
Prerequisite: BAMG 350 or equivalent. This course will 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 Standing. 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 Personal Selling (3) Prerequisite: BAMK 360. This is an activity course emphasizing both theoretical and practical knowledge and skills required to analyze industrial buying centers and prepare and make effective sales presentations.

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 Public Policy Issues in Marketing (3) Prerequisite: BAMK 360. An activity course studying public policy issues and legal aspects affecting marketing activities. Analyze alternatives available to business government and consumers to address these issues.

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 422 Directed Studies (1-3)
Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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)
Prerequisites: BAMK 362, 368; BAFN 370 and senior standing 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 463 Sales Management (3)
Prerequisites: BAMK 360, 364; BACS 291. This is an activity course emphasizing theory and practice in sales management. Topics include sales planning and forecasting, recruiting, training, compensation, motivation, sales volume, and cost analysis.

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 465 Seminar in Retailing (3)
Prerequisite: BAMK 366. A seminar course with direct applications of retailing skills and problem solving in retail management through use of cases and special projects developed from existing cases in retailing.

BAMK 466 Market Analysis and Research II (3)
Prerequisite: BAMK 368. This is a seminar course in Market Research including case analysis and/or conducting a marketing research project. Includes application of research procedures.

BAMK 468 Industrial Marketing (3)
Prerequisite: BAMK 360. This is an activity course in theoretical and practical aspects of marketing industrial goods and services. Emphasizes analysis and segmentation of industrial markets and development of marketing mixes to serve those markets.

BAMK 469 Distribution Management (3)
Prerequisite: BAMK 360. An activity seminar course designed to explore the techniques utilized by marketing oriented distributing managers within the world-wide logistics process. Computer simulation and/or case analysis may be used.

BAMK 492 Internship in Marketing (1-3)
Prerequisite: Consent of faculty co-ordinator. This course gives the student practical experience and opportunities to apply theory from academic marketing courses. S/U grade.

BAMK 495 Special Topics in Marketing (1-3)
Prerequisite: Consent of instructor. This seminar course explores various advanced marketing topics. The course is offered as needed.

BAMK 560 Marketing Management (3)
Prerequisite: 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.)

BAMK 665 Seminar in Marketing (3)
Prerequisite: BAMK 360 or 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.

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)
An exploration of biological principles of concern to the educated layperson. Topics include ecology, evolution, the cell, organs and systems, inheritance and disease. Credit not allowed for biological science majors and minors.

BIO 110 Principles of Biology (4) (3 lecture, 3 laboratory)
Investigate principles which 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.

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.

BIO 270 Biology and Behavior of Human Sexuality (2)
Study of the human reproductive process, with structure and function of organs, organic response, genetics of sex, fertility, contraception, and sexual behavior patterns.

BIO 351 Microbiology (4) (3 lecture, 3 laboratory)
Prerequisites: BIO 110 and BIO 111 or ZOO 105; 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)
Prerequisite: admission to PTE or consent of instructor. Demonstrations and strategies appropriate for lecture and laboratory instruction, including computer usage and controversial issues, will be presented.

BIO 380 Aquatic Biology (4) (3 lecture, 3 laboratory)
Prerequisites: BIO 110, 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. Course may be repeated with different topics but total may not exceed six hours. Each workshop is subtitled and no subtitle may be repeated for credit.

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 (2)
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 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. May be repeated with different topics but total may not exceed 10 credit hours.

BIO 491 Senior Seminar (0.5)
Course may be repeated once with different topic. Survey research, literature and career opportunities in selected biological areas. S/U grade.

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 grade.

BIO 494 Practicum in College Biological Science Instruction (1-2) Prerequisites: BIO 110, 111. Course may be repeated but total may not exceed 2 credit hours. 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. Course may not be repeated but total hours may not exceed six hours. Conduct original research in the biological sciences. Submit two copies of a final report. S/U grade.

BIO 501 Current Issues in Biology (1) Course varies in content, reviewing current issues of biology, botany or zoology.

BIO 408/508 Workshop (0.5-6) Study topic of biological interest for up to four weeks. Course may be repeated with different topics but total may not exceed six hours. Each workshop is subtitled and no subtitle may be repeated for credit.

BIO 513 Professional Enrichment (1-10) Study a topic of biological interest for four to fifteen weeks. Course may be repeated with different topics but total may not exceed 10 credit hours.

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 (2) 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, 111, CHEM 131 or 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) Prerequisite: Full admission to PTE or consent of instructor. Demonstrations and strategies appropriate for lecture and laboratory instruction, including computer usage and controversial issues, will be presented.

BIO 485/585 Topics in Field Biology (1-10) After preparatory work, study biology in the field on a state, national or international basis. May be repeated with different topics but total may not exceed 10 credit hours.

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 grade.

BIO 595 Special Topics in Biology (3) Study of any biological topic at an advanced level. Course may be taken up to two times with different topics.

BIO 621 Advanced Genetics (3) Prerequisites: BIO 220 or equivalent and CHEM 131; recommended, 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) Course may be repeated. Invited speakers present topics of interest pertinent to biology. S/U grade.

BIO 691 Seminar in Biological Sciences (0.5) Course may be repeated with different topics. Students will research and present seminars on selected topics of current biological interest. S/U grade.

BIO 694 Foundations of Biological Research (2) Delineate philosophy, methods of research, and oral and written presentations of scientific findings. Required of all first year graduate students in biological sciences.

BIO 697 Graduate Research (1-6) BIO 694 and consent of instructor. Course may be repeated but total may not exceed 6 credit hours. 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 (1-10) Prerequisite: BIO 694. Course may be repeated but total may not exceed 10 credit hours.

BIO 792 Doctoral Supervised Teaching (1-6) Experience supervised college level biological sciences teaching. Develop course outlines and effective teaching techniques. Course may be repeated but total may not exceed six hours.

BIO 797 Doctoral Proposal Research (1-4) Course may be repeated but total may not exceed 4 credit hours. Four hours required of all doctoral students before admission to candidacy. S/U graded.

BIO 799 Doctoral Dissertation (1-12) Course may be repeated for a total of 12 credit hours. Required of all doctoral candidates. S/U graded.

Black Studies

BLS 100 Introduction to Black Studies (3) Course 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) Course addresses social conditions which 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 105 Ancient African Civilization (3) Investigates the development of the civilization of ancient Egypt and its influences on the philosophical development of African countries and ancient Greece. Emphasis is on religion and philosophy.

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) Examine the lives of black Americans from emancipation to the present.

BLS 205 African and Native American Worldviews (3) Investigates the religious and philosophical worldviews of traditional African and Native American peoples as they are reflected in these cultures: cosmology, ontological hierarchy, metaphysics, morality, panoramic notions, concepts of history, etc.

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 U.S., 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 322 Black Nationalism and Pan-Africanism (3) A study of the development of movements for self-determination in Afro-America and an analysis of various nationalistic conceptual frameworks in the Diaspora and on the Continent.

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 385 African Colonialism and Decolonization (3) A study of the social, psychological and philosophical dimensions of colonial oppression and the methods of decolonization.

BLS 395 Aspects of the African-American Experience (3) Topics include Afro-American cultures, black psychology and black media. Course may be taken more than once, but no subtitle may be repeated for credit.

BLS 397 Philosophy of Afro-Americans (3) Prerequisite: BLS 100 or permission of instructor. Examines both Afro-American philosophy proper and the philosophical concerns of Afro-Americans generally through a treatment of their work.

BLS 399 Community Study Project (1-4) Do field work in a community-based project in housing, education or social services.

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.)

BLS 432 Pan African World (3) Compare the politics and government of selected states and colonies in Africa, the Caribbean, South America and the United States.

BLS 450 Philosophy and Theology of Martin L. King, Jr., and Malcolm X (3) Critical study and analysis of the major ideas and doctrines that formed the conceptual framework of the two men: Cultural Pluralism, Self-Determination, Pan Africanism, Personalism, Satyagraha, Non-Violence, Civil Disobedience, Reform and Revolution.

BLS 460 Religion and Theology in Black America (3) Examines the development of the black church in America from the period of 1st Great Awakening and investigates and analyzes the theological foundation, the nature and source of Afro-American religious expression.

BLS 470 African Philosophy (3) Prerequisite: BLS 105 or permission of instructor. Explores ancient, traditional and contemporary philosophical/ theological concepts and doctrines of Africans through an investigation of their cosmological, metaphysical, ontological, and ethical world view.

BLS 490 Seminar in Black Studies (3) Prerequisite: BLS 100, BLS 105, BLS 201, BLS 202, or permission 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.

BLS 508 Workshop in Black Studies (1-3) Provides interactive opportunity for sociocultural economic exploration of total complexity of participants' educational problems.

BLS 513 Professional Renewal (1-4) Various topics in black studies investigated, depending on instructor. Course may be taken for credit more than once, but no subtitle may be repeated for credit.

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.

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 and 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. Course may be taken up to two times with different topics.

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 (1-10) Course may be repeated but total may not exceed 10 credit hours.

Computer Education

Computer Education courses are administered by the Department of Mathematics and Applied Statistics. Additional computer-related offerings can be found under Computing, General and Computer Science.

CED 195 Special Topics in Computer Education (1-3) Prerequisite: Consent of instructor. Topics which reflect the specific interests of available professors and the specific needs of interested undergraduates.

CED 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) Prerequisite: Junior standing or consent of instructor. Topics in computer science which reflect the specific interests of available instructors and the specific needs of the students.

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.)

CE 444 Supervised Teaching (3-8)
Prerequisite: Full admission to PTE or certification at the undergraduate level. 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 cooperating teacher in the evaluation of the student teacher. S/U grade.

CE 490 Seminar (1) Prerequisite: Junior or senior level standing 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 (3) Problems discussed vary according to the instructors of the course. Each workshop has a subtitle, and no subtitle may be repeated for credit.

CE 513 Professional Renewal (3) Topics of interest in computer science will depend on instructor and each course will have a subtitle. No subtitle may be repeated for credit.

Computing, General

Computing, General courses are administered by the Department of Mathematics and Applied Statistics. Additional computer-related offerings can be found under Computer Science and Computer Education.

CG 100 Computers and Their Impact on Society (3) Content will include the history of the computer, simple computer design, hardware and software principles, programming in the BASIC language, and issues concerning the impact of computers upon society.

CG 105 Personal Computer Applications (3) Operate and use microcomputers for personal applications such as word processing, spelling correction processing, mailmerging 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 computer 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. Learn the FORTRAN 77 computer language. Become familiar with designing and writing structured programs in the FORTRAN 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. Structured programming introducing Pascal language. 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 Computer Education (1-3) Prerequisite: Consent of instructor. Topics which reflect the specific interests of available professors and the specific needs of interested undergraduates.

Community Health

CH 205 Issues in Health (3) Analyze the variety of forces which currently affect the well-being of human population groups on a national level.

CH 209 Foundations of Health Promotion/Health Education (3) Course provides overview of the field of health promotion/education including: evolution of the profession, scientific and theoretical bases, 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 which 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 (3) Assignment to a community health agency. Assisting professional staff, the student will be given the opportunity to apply basic skills and observe the health education program of the facility.

CH 299 Community Health Systems (3) Investigation and discussion of community organization, major community health problems and the role and function of various community agencies, programs, and services related to problem resolution.

CH 303 Health Education in the Elementary School (1) 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 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) This course is designed to discuss the etiology, treatment and control of the most significant diseases which affect the population of the U.S. 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) Discussion of the relationships of environmental pollution to the ecosystem and health of humans. Analyze major areas of environmental pollution: water, air, solid wastes, pesticides, radioactive wastes, and population.

CH 405/505 Media and Materials for Health Education (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. Each workshop has a subtitle, and no subtitle may be repeated for credit.

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.)

CH 440 Foundations of Health Program Management (3) Course 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.

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 Media and Materials for Health Education (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 which shape people's sexual behaviors.

CH 508 Workshop in Health Education (1-3) Opportunities for study in individual's problem areas, varying according to experts conducting workshops. Each workshop has a subtitle, and no subtitle may be repeated for credit.

CH 509 Seminar in Health Behavior (3)
Course will review theories of behavior and behavior change as they relate to current health issues. Health behavior change models will be examined and applied.

CH 520 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 525 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 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 630 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 622 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

CH 630 Seminar in Health Promotion Strategies (3) Prerequisite: CH 509, CH 560, or consent of instructor. Course examines the effectiveness of a wide range of strategies used in health promotion/disease prevention programs. Current literature/programs are presented and reviewed.

CH 640 Principles of Health Program Management (3) Course 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 650 Seminar in Health Education (2-4) Present contemporary topics under guidance of qualified graduate faculty and consultants. Each area will have a subtitle, but no subtitle may be repeated for credit.

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 (1-15) Optional for Master of Arts candidates in Health Education.

Chemistry Education

CHED 494 Tutoring in Chemistry (1-2)
Prerequisites: CHEM 321 and 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.

CHED 495 Seminar in Teaching Chemistry (2) Prerequisite: Full admission to PTE, 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 grade.

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 530 Organic Chemistry: Concepts and Applications (3) (2 lecture, 2 laboratory) Prerequisite: Colorado Teacher Certification in Sciences 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 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 100 Consumer Chemistry Laboratory (1) Prerequisite or Corequisite: CHEM 101. 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.

CHEM 101 Consumer Chemistry (3) No previous chemistry required. Physical and chemical principles, illustrated by demonstrations and contemporary readings, to understand current topics in chemistry; such as, polymers, farm chemistry, food additives, chemotherapy, and drugs.

CHEM 103 Introductory Chemistry (3) Basic chemistry concepts to prepare those with no chemistry background for CHEM 111 or 108. No credit allowed for chemistry major or minor.

CHEM 108 Fundamentals of General and Organic Chemistry (5) (4 lecture, 3 laboratory) Prerequisite: high school chemistry is strongly recommended. Fundamentals of general and organic chemistry will be studied with emphasis on the allied health professions (nursing, food and nutrition, health, kinesiology, etc.) Fee required.

CHEM 110 Current Topics About Chemistry (2) The scientific method applied to a study of current problems and topics in chemistry. Topics announced when offered. Credit not allowed for chemistry major or minor.

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 (4) (3 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)

Prerequisites: one year of high school chemistry and two years of high school algebra or equivalent. Corequisite: CHEM 117. Enrichment course for the well-prepared student. Atomic theory, stoichiometry, bonding, states of matter, and solutions.

CHEM 115 General Chemistry II (4)

Prerequisite: CHEM 111 or CHEM 114. Corequisite: CHEM 118. Continuation of CHEM 114. Enrichment course for the well-prepared student. Topics include electrochemistry, acid-base chemistry, descriptive inorganic chemistry.

CHEM 117 General Chemistry I Laboratory (1) (3 laboratory)

Corequisite: CHEM 114. Enrichment laboratory for the well-prepared student. Laboratory experiences parallel topics covered in CHEM 111 or CHEM 114.

CHEM 118 General Chemistry II Laboratory (1) (3 laboratory)

Corequisite: CHEM 115. Continuation of CHEM 117. Enrichment laboratory for the well-prepared student. Topics include electrochemical, acid-base and qualitative analysis experiments.

CHEM 131 Introductory Organic Chemistry (4) (3 lecture, 3 laboratory)

Prerequisite: CHEM 111. A brief introduction to modern organic chemistry. Structure, nomenclature, reactions, and uses of organic compounds. Will not substitute for CHEM 331. Fee required.

CHEM 208 Fundamentals of Human Biochemistry (5) (4 lecture, 3 laboratory)

Prerequisites: CHEM 108, CHEM 131, or CHEM 331. Biochemistry of the human organism, including the chemistry of cellular and body constituents and processes, foods and nutrition, and metabolic diseases.

CHEM 320 Theory and Use of Analytical Instruments (1) (3 laboratory)

Prerequisite: CHEM 331. Techniques of sample preparation and data collection for IR, NMR, UV-visible and AA spectrophotometers and gas chromatograph.

CHEM 321 Analytical Chemistry (5) (3 lecture, 6 laboratory)

Prerequisites: CHEM 112 or CHEM 115 and CHEM 320. Classical instrumental analysis, including gravimetric, titrimetric, electrochemical, chromatographic and spectroscopic methods. Fee required.

CHEM 331 Organic Chemistry I (5) (4 lecture, 3 laboratory)

Prerequisite: CHEM 112 or CHEM 115. Nomenclature, reactions and synthesis of organic compounds. Credit not allowed for both CHEM 131 and CHEM 331. 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.

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 422 Directed Studies (1-3)

Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

CHEM 441 Inorganic Chemistry I (2)

Prerequisite: CHEM 320. 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 inter-relationships among reactions, energetics and dynamics.

CHEM 450 Survey of Physical Chemistry (4) (3 lecture, 3 laboratory)

Prerequisites: CHEM 332, MATH 131, PHYS 221. Corequisite: CHEM 321. One semester survey of physical chemistry (thermodynamics, chemical kinetics, and quantum mechanics). Not applicable to the "professional" and "biochemistry" emphasis areas in chemistry.

CHEM 451/551 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.

CHEM 454 Physical Chemistry II Laboratory (1) (3 laboratory)

Prerequisite: CHEM 453. Corequisite: CHEM 452. Continuation of CHEM 453.

CHEM 481 General Biochemistry I (3)

Prerequisite: CHEM 331. Chemistry of biologically important compounds (proteins, nucleic acids, carbohydrates and lipids), emphasizing structure and function, methods of isolation, identification and characterization, kinetics and mechanisms of enzyme catalysis.

CHEM 482 General Biochemistry II (3)

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. 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 483. Continuation of CHEM 483. Techniques involved in the isolation and characterization of lipids and metabolism.

CHEM 490 Advanced Laboratory in Chemistry (1) (3 laboratory)

Prerequisite: CHEM 332. Experimentation using modern techniques of the four areas of chemistry.

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.

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.

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 and 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)

Prerequisite: One year of physical chemistry. 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)

Prerequisite: One year of physical chemistry 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)

Prerequisite: One year of physical chemistry. 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 582 General Biochemistry II (4)

Prerequisite: CHEM 332 and CHEM 581 or equivalent. A continuation of CHEM 581. Elioenergetics, electron transport systems, metabolism of carbohydrates, lipids, nucleotides and amino acids.

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.

CHEM 600 Seminar in Chemistry (1) Course may be taken up to four times. Oral report and discussion on some topic of interest from current literature.

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.)

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 699 Thesis (1-10) Required of Master of Arts candidates in the Arts and Sciences chemistry program.

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.

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.

CHEM 799 Doctoral Dissertation (1-12)

Required of all doctoral candidates. See Doctor of Arts — Minimum requirements for the major in the Graduate School section of this *Bulletin*.

Communication Disorders

CMDS 160 Introduction to Human Communication Disorders (3) Survey identifying characteristics; causes, diagnosis and treatment of speech and language disorders. Observation in UNC Speech-Language Pathology and Audiology Clinic required.

CMDS 260 Introduction to Phonetics (3) Characteristics of American English speech sounds and the International Phonetic Alphabet symbols used to represent them. Normal phonological development.

CMDS 265 Acoustics of Speech (2)

Prerequisite: Basic math and consent of instructor. The physics of sound as it relates to speech and hearing.

CMDS 266 Normal Speech and Language Development (3) Normal speech and language development and their relationship to other aspects of child development.

CMDS 267 Anatomy and Physiology of the Speech and Hearing Mechanism (3)

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, Stuttering and Voice Disorders (3)

Prerequisite: CMDS 260. Current information regarding identification, causation, diagnosis, and treatment of disorders of articulation, stuttering, and voice disorders.

CMDS 365 Language Disorders in Children I (2)

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: Consent of instructor. Methods of eliciting language samples from children and manual and computerized language sampling analyses.

CMDS 370 Basic Audiology (4)

Prerequisites: CMDS 265 and 267 (267 may be concurrent). Pure-tone testing, methods of speech audiometry, interpretation of audiometric data in terms of physical, social and educational effects. Pathology of the auditory/vestibular system. Clinical observation required. Fee required.

CMDS 371/571 Speech and Hearing Science (4)

Prerequisites: CMDS 265 and 267. Study of factors related to speech production, with emphasis on acoustics of complex auditory signals. Fee required.

CMDS 386/586 Basic Clinical Strategies in Speech-Language Pathology/ Audiology (4)

Treatment models for communicatively-disordered clients; development and implementation of individual treatment programs; report writing; the client-clinician relationship; assessment of treatment outcomes. Clinical observation required.

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.

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.)

CMDS 431 Organically-Based Communication Disorders (3)

Prerequisites: CMDS 160 and 267. Current information regarding identification, causation, diagnosis, and treatment of organically-based communication disorders, including cleft palate, cerebral palsy, and aphasia.

CMDS 467 Diagnostic Methods and Observation (3)

Prerequisites: CMDS 360, 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. Clinical observation required.

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 472 Advanced Audiology (3)

Prerequisite: CMDS 370. Theory and practice of advanced techniques of audiometric assessment.

CMDS 474/574 Clinical Practicum in Audiology (1)

Prerequisite: CMDS 472 or taken concurrently. Perform basic audiometric testing: audiometric screening, routine hearing evaluation and impedance audiometry. S/U grade. Fee required.

CMDS 480 Introduction to Aural (Re)habilitation (3)

Prerequisite: CMDS 370. Philosophy and practice in aural (re)habilitation for hearing-impaired children and adults.

CMDS 483/583 Entry/Primary Speech-Language Pathology Practicum (2)

Prerequisites: CMDS 360; CMDS 365, 2.7 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 grade. Fee required.

CMDS 485 Advanced Undergraduate Speech-Language Pathology Practicum (2)

Prerequisite: CMDS 483, 2.7 GPA in major courses or consent of clinical co-ordinator. May be repeated for up to six credits. Supervised practicum with communicatively-disordered clients; for advanced undergraduate students. Fee required.

CMDS 508 Workshop in Communication Disorders (1-3)

May be repeated for up to nine credits. Current issues, problems, programs and topics of local and national interest in speech-language pathology and audiology.

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 (5) Causation, diagnosis and treatment of speech and language disorders resulting from neurological dysfunction.

CMDS 568 Counseling in Communication Disorders (3) Theory and practice of counseling with communicatively-disordered clients and/or their parents.

CMDS 569 Advanced Diagnostic Procedures (2) Must be taken for a minimum of four credits. Prerequisite: CMDS 583 or CMDS 585 taken concurrently. May be repeated for up to six credits. Perform speech-language screenings and diagnostic evaluations. Fee required.

CMDS 570 Rehabilitative Audiology (3) Theory and procedures for habilitation/rehabilitation of children and adults with hearing handicap.

CMDS 371/571 Speech and Hearing Science (4) Prerequisites: CMDS 265 and 267. Study of factors related to speech production and perception, with emphasis on acoustics of complex auditory signals. Fee required.

CMDS 572 Industrial/Public Health Audiology (2) Effects of noise on behavior and on the auditory mechanism. Methods of noise measurement and attenuation; fundamentals of hearing-conservation programs.

CMDS 573 The Auditory Mechanism (3) Prerequisite: CMDS 267. Detailed study of the anatomy and function of the human ear.

CMDS 474/574 Clinical Practicum in Audiology (1) Prerequisite: CMDS 472 or taken concurrently. Perform basic audiometric testing: audiometric screening, routine hearing evaluation and impedance audiometry. S/U grade. Fee required.

CMDS 580 Practicum in Rehabilitative Audiology (2) Prerequisite: CMDS 483. May be repeated for up to six credits. Habilitation/rehabilitation of acoustically-handicapped persons. 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: 2.7 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 grade. Fee required.

CMDS 585 Advanced Graduate Practicum in Speech-Language Pathology (2) Prerequisite: CMDS 483/583. May be repeated for up to eight credits. Supervised individual and group therapy experiences with communicatively-disordered clients. Fee required.

CMDS 386/586 Basic Clinical Strategies in Speech-Language Pathology/Audiology (4) Treatment models for communicatively-disordered clients; development and implementation of individual treatment programs; report writing; the client-clinician relationship; assessment of treatment outcomes. Clinical observation required.

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 grade.

CMDS 594 Advanced Clinical Practicum in Audiology (2) Prerequisite: CMDS 474 or 574. May be repeated for up to six credits. Perform the full range of clinical audiological services, including special testing, hearing aid evaluations, and dispensing of hearing aids. Fee required.

CMDS 615 Seminar in Communication Disorders (1) May be repeated for up to four credits. Must be taken three times. Topics include instrumentation, referenced writing, program planning in public schools, professional issues, and clinical supervision.

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.)

CMDS 660 Articulation Disorders (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) Prerequisite: CMDS 365 or consent of instructor. 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) May be repeated for up to 12 credits. 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.

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, and 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 574. Perform audiological services in schools (grades K-12) under supervision of a certified Audiologist.

CMDS 675 Differential Diagnosis of Auditory Problems (5) Prerequisites: CMDS 472, CMDS 573. 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) Prerequisite: CMDS 267. Advanced study of normal and disordered aspects of speech physiology.

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 grade.

CMDS 699 Thesis: Communication Disorders (6) Individual original research under the direction of faculty, aimed at acquisition of research skills, appreciation of the scientific inquiry process, and knowledge of scientific writing style and dissemination. S/U grade.

Communication

COMM 600 Graduate Study in Communication (2) Orientation to graduate study with emphasis on learning to conduct literature reviews using the major journals of the speech communication and mass communication disciplines.

COMM 601 Qualitative Methods in Communication Research (2) Orientation to the methods of qualitative research that are most frequently used in the speech communication and mass communication disciplines.

COMM 602 Quantitative Methods in Communication Research (2) Orientation to the methods of quantitative research that are most frequently used in the speech communication and mass communication disciplines.

COMM 603 Communication Theory (3) The study of current theories of human communication and the process of theory building.

Computer Science

Computer Science courses are administered by the Department of Mathematics and Applied Statistics. Additional computer-related offerings can be found under Computing, General and Computer Education.

CS 150 Computer Processing and Algorithmic Design (3) Primarily for the beginning computer science student. Become familiar with the currently used operating system, editor, and utility programs. Students will learn algorithm design and structural programming rules.

CS 160 Structured Programming Languages I (3) Corequisite CS 150. Study argument passing of function and procedure, multidimensional arrays, records, files, sets, pointers, linked lists, recursion, searching, sorting, and external routines.

CS 170 Digital Logic Design (3) (2 lecture, 2 laboratory) Introduction to the fundamentals of logic design, the mechanics of information transfer and control, and the organization and structure of the major hardware components of computers.

CS 180 Structured Programming II (3) Prerequisite: CS 150, CS 160 with grade of "C" or better. Study several currently used languages, their syntax, structure and uses. Possible languages would be FORTRAN, COBOL, BASIC, C, Ada, and Modula II.

CS 195 Special Topics in Computer Science (1-3) Prerequisite: Consent of instructor. Topics which reflect the specific interests of available professors and the specific needs of interested undergraduates.

CS 250 Computer Architecture (3) Prerequisite: CS 170 with grade of "C" or better. Fundamentals of the design and organization of digital computers. Topics cover logical design, type of memory, Von Neumann machines, microprocessors and large parallel computers.

CS 260 Assembly Programming (3) Prerequisite: CS 180 with grade of "C" or better. Study basic computer organization, machine language programming, and the use of a specific assembler language programming system.

CS 270 Introduction to Operating Systems (3) Prerequisite: CS 180 and CS 250 with grade of "C" or better. Study process management, storage management, processor management, and auxiliary storage management. Examine several major operating systems.

CS 280 Data Structures (3) Prerequisite: CS 180 with grade of "C" or better. Study techniques used to store and manipulate data. Topics will include arrays, stacks, queues, trees, graphs, searching, sorting, symbol tables, files, and storage management.

CS 350 Systems Programming (3) Prerequisite: CS 260, CS 280, and CS 270 with grade of "C" or better. Study writing assemblers, loaders, linkers, macro processors and other system software. Design and implement a system software project.

CS 360 Advanced Data Structures (3) Prerequisite: CS 280 with grade of "C" or better. Continuation of CS 280. Topics include B-trees, strings, external sorting and advanced file organization.

CS 370 Software Engineering (3) Prerequisite: CS 350 with grade of "C" or better. Study concepts of engineering software systems. Design and implement a software system project using the team approach.

CS 380 Programming Languages (3) Prerequisite: CS 280 with grade of "C" or better. Study programming language concepts and design. Examine a wide variety of languages with an emphasis on their structure and use.

CS 395 Special Topics in Computer Science (1-3) Prerequisite: Consent of instructor. Topics in computer science which reflect the specific interests of available instructors and the specific needs of the students.

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.)

CS 450 Analysis of Algorithms (3) Prerequisite: CS 360 with grade of "C" or better or consent of instructor. An introduction to the theory and analysis of algorithms. Topics will include efficiency, models, sorting, searching, graphs, matrix representation, fast fourier transform, pattern matching, bounds, completeness, and intractability.

CS 455 Computer Communication and Networking (3) Prerequisite: CS 270, CS 280 with grade of "C" or better. Study the basics of computer telecommunications, transmission systems, and networking.

CS 460 Artificial Intelligence (3) Prerequisite: CS 380 with grade of "C" or better or consent of instructor. An introduction to the concepts and application of intelligent systems. Study the question of learning, pattern recognition, computer problem solving and heuristic approaches.

CS 470 Operating Systems (3) Prerequisite: CS 350 with grade of "C" or better. Study problems encountered in multiple user computer systems. Cover both multiprogramming and multiprocessing concepts.

CS 475 Graphics (3) Prerequisite: CS 360 with grade of "C" or better. Study graphics theory and applications.

CS 480 Compilers (3) Prerequisite: CS 350, CS 360, CS 380 with grade of "C" or better. Study techniques of compiler writing. Design and implement a compiler project using available tools.

CS 490 Seminar (1) Prerequisite: Junior or senior level standing 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.

CS 492 Internship (1-8) Prerequisite: Senior level standing or consent of instructor. Obtain practical experience and have opportunities to utilize computer science theory. S/U grade.

CS 497 Senior Project (1-8) Prerequisite: Senior level standing. A significant application in computer science will be researched, developed and implemented under the guidance of a computer science professor.

College Student Personnel Administration

CSPA 150 New Student Seminar (1) 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. S/U grade.

CSPA 160 Career and Self Exploration (2) Investigate components of self such as interests, values, and skills. Learn about occupations and decision making. Designed to assist in choosing a field of study related to desired career. Fee required.

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 (1-3) Prerequisite: Consent of instructor. 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.

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 quarters as need arises and resources are available. S/U grade.

CSPA 360 Paraprofessionals in Student Affairs (1-2) Prerequisite: 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. (May be repeated for credit under different subtitles)

CSPA 508 College Student Personnel Administration Workshop (1-3) Special short courses on topics or issues in College Student Personnel Administration. Offered during summers and other quarters as need arises and resources are available. S/U grade.

CSPA 583 Crisis Intervention (1) Prerequisite: PSY 344 or PPSY 607 or CSPA 683. 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.)

CSPA 650 College Environments and Student Development: Theory and Research (4) Examines theories of human development as they apply to college students, impact of various environments on student development and instruments used to measure same.

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 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 (4) Introduces students to six functions of management: Planning, organizing, budgeting, staffing, directing, evaluating. Skill development component of course focuses primarily on budgeting models, resource management, planning, and intervention strategies.

CSPA 661 Practicum in College Teaching for Student Development (2) Prerequisite: Consent of instructor. Actual classroom experience in teaching under supervision any course which has as a part of its objectives, developmental content. S/U grade.

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. Repeatable with different subtitles to maximum of 18 hours. S/U grade.

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. Repeatable with different subtitles to a maximum of 12 hours (8 hours per week plus bi-weekly seminar) S/U grade.

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 683 Human Interaction Skills for Student Affairs Professionals (1) Learn nonverbal attending and listening skills, crisis intervention and referral skills appropriate to a college setting, and survey major counseling perspectives. Theory to practice is emphasized.

CSPA 684 Group Leadership in Student Affairs (2) Prerequisite: CSPA 683 or equivalent. 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 752 Current Issues in College Student Personnel Administration (2) Prerequisite: 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) Prerequisite: Consent of instructor. Examine techniques of evaluating student personnel services in higher education. Evaluate reported research and identify areas of needed research.

CSPA 758 Seminar in College Student Personnel Administration (1) Required doctoral seminar which covers topics of special importance to the profession. Must be taken three times, although credit is only required the first time. S/U grade.

CSPA 797 Doctoral Proposal Research (1-4) Prerequisite: Permission of major advisor. A required dissertation proposal experience for all doctoral students. Student may register for 1-4 hours in any semester, but must earn a minimum/maximum of 4 hours of credit in this course in partial fulfillment of requirements for all doctoral degrees before admission to candidacy. S/U grade.

CSPA 799 Doctoral Dissertation (1-12) Prerequisite: 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. A student may register for 1-12 hours of credit for the dissertation in partial fulfillment of the requirements for the degree. S/U grade.

Economics

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, 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. 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 and 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 and 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 and ECON 105. Analyze theoretical underpinnings of international trade and their relevance to practical issues. Trade impediments, trade policies and institutions which have evolved in a dynamic international system are also discussed.

ECON 346 International Finance (3) Prerequisites: ECON 103 and ECON 105. 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 Intermediate Macroeconomics (3) Prerequisites: ECON 103 and 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 and 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) Prerequisite: ECON 300. 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 and 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) Prerequisite: Consent of major advisor. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

ECON 451/551 Introduction to Quantitative Economics (3) Prerequisites: ECON 300 and MATH 131. 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 Introduction to Econometrics (3) Prerequisites: ECON 103 and ECON 105, BACS 291 and BACS 390. Estimating statistical regression models of economic relationships; treatment of special problems that may arise in analysis of economic data. Microcomputers will be used.

ECON 455/555 Regional Theory and Methods (3) Prerequisites: ECON 103, ECON 105, ECON 300, ECON 310; MATH 131. Definition and analysis of regions and their problems; regional programs and operational models. National planning and autonomous development. Microcomputers will be used.

ECON 462 Economic History of the U.S. (3) Prerequisites: ECON 103, ECON 105 or consent of instructor. Review the historical changes in U.S. economic institutions. Assess U.S. 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 and ECON 105. Trace the evolution of economic thinking from 17th century to modern day. See roles played by certain "schools" of economic thinkers, the genesis of their ideas and the contributions.

ECON 480 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. May be taken twice for a total of 8 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. May be taken twice for a total of 8 credits.

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 in Economics (1-5) A variety of workshops on special topics. Each has a subtitle and no subtitle may be repeated for credit. S/U grade.

ECON 513 Professional Renewal (1-12) A study of various topics of interest in economics, depending on instructor. Each course is subtitled and no subtitle may be repeated for credit.

ECON 550 Advanced Macroeconomics (3) Prerequisites: ECON 103, ECON 105, and consent of instructor. An in-depth study of a theoretical framework for analysis of problems of unemployment, economic instability, inflation, and economic growth.

ECON 451/551 Advanced Quantitative Economics (3) Prerequisites: ECON 105 and MATH 131. Study of mathematical techniques used in economic analysis; fundamental concepts underlying marginal analysis, linear programming, decision and game theory. Microcomputers will be used. Graduate students do extra work.

ECON 452/552 Advanced Econometrics (3) Prerequisites: ECON 103, ECON 105, BACS 291 or BACS 390. Estimating statistical regression models of economic relationships; treatment of special problems in analysis of economic data. Microcomputers will be used. Graduate students do extra work.

ECON 455/555 Advanced Regional Theory and Methods (3) Prerequisites: ECON 103, ECON 105, ECON 300 and ECON 310; MATH 131. Definition and analysis of regions and their problems; regional programs and operational models. National planning and autonomous development. Microcomputers will be used. Graduate students do extra work.

ECON 470/570 History of Economic Thought (3) Prerequisites: ECON 103 and ECON 105. Trace the evolution of economic thinking from the 17th century to modern day. See roles played by certain "schools" of economic thinkers, the genesis of their ideas and their contributions.

ECON 580 Advanced 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. May be taken twice for a total of 8 credits.

Educational Administration

EDAD 385 Law and the Classroom Teacher (2) Prerequisite: Admission to PTE. 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.

EDAD 508 Workshop in Administration (1-3) Deals with specific administrative problems of participants. Each workshop has a subtitle, and no subtitle may be repeated for credit. S/U grade.

EDAD 510 Developing Grants and Contracts (2) Identify various special funding programs available to schools and colleges and develop proficiency in proposal writing and grant application.

EDAD 513 Professional Renewal Experience (1-3) Enhance skills and knowledge of educational administration. Subtitle indicates specific subject matter, and no subtitle may be repeated for credit. S/U grade.

EDAD 520 Law and the Teacher (2) Examine the law as it affects classroom teachers, with special attention to liability for personal injury, discipline, and teacher rights and responsibilities.

EDAD 525 Governance of American Education (3) Analyze distribution of government power over education at federal, state, and local levels; examine role of public and private schools in society; and study theories of organization behavior. Special attention to multi-cultural education in a pluralistic society.

EDAD 610 School Finance and Budgeting (3) Examine revenues for school systems, tax theories, fiscal policies, and state school finance plans. Understand strategies for resource allocation, fund accounting systems, and relationship of program planning to budget processes.

EDAD 611 School Business Management (3) Prerequisite: EDAD 610. Understand problems and procedures of such management functions as transportation, property control, food services, facility maintenance, purchasing, insurance, and investments.

EDAD 620 Law and the Administrator (3) Relate statutory provisions, court decisions, common law principles, and constitutional requirements to legal problems affecting organization and administration of public and private school systems.

EDAD 621 Law and Higher Education (3) Relate statutory provisions, court decisions, common law principles, and constitutional requirements to legal problems affecting public and private higher education institutions and systems.

EDAD 622 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

EDAD 625 Organization and Administration of Community Colleges (3) Analyze the purposes and governance of community college institutions and systems, examine structure and functions, and study major administrative problems.

EDAD 630 Planning and Change in Education (3) Understand techniques of comprehensive planning applied to education; examine change theory and organization development; identify strategies of initiating, implementing, and evaluating change.

EDAD 632 Supervision and Evaluation (3) Develop knowledge, strategies, and application skill in evaluation of programs, student performance, and employee performance.

EDAD 633 Policy Analysis and Development (3) Study standard techniques for analyzing, evaluating, and developing policies for educational systems and organizations, with special attention to contemporary policy issues.

EDAD 641 Seminar on Decision Theory (3) Understand the nature of rational and intuitive decision making; examine research on factors influencing group behavior in decision making.

EDAD 642 Seminar on Communication and Community Relations (3) Examine the implications of communication theory and research for the development of community understanding, with special attention to mass media, power structures, and communication networks.

EDAD 650 School Personnel Administration (2) Examine the personnel functions in school systems, including manpower planning, recruitment and selection, transfers and promotions, staff development, compensation plans, and recordkeeping. Special attention to affirmative action/equal opportunity goals and strategies.

EDAD 651 Conflict Management in Education (3) Review causes of conflict and strategies for conflict resolution, with special attention to alternative models of collective bargaining. Emphasizes role-playing and simulation.

EDAD 652 History of Higher Education in the United States (2) Trace origins of American higher education to the medieval European university; examine evolution of the American higher education systems; study impact of socioeconomic-political conditions in institutional operation.

EDAD 653 College and University Curriculum (3) Develop understanding of current higher education curriculum practices and issues in the context of historical, philosophical, and political influences; examine implications of lifelong learning, non-traditional learners, and client-centered programming.

EDAD 654 Personnel Management in Higher Education (3) Analyze personnel functions in higher education, with special attention to manpower planning, recruitment and selection, staff development, compensation plans, performance review, and affirmative action/equal opportunity goals and strategies.

EDAD 655 Finance and Resource Management in Higher Education (3) Analyze issues of financing public and private higher education; examine alternative financing sources and methods; develop skill in resource allocation and management.

EDAD 670 The School Principalship (3) Prerequisite: EDAD 525. Examine leadership responsibilities of building principals, the problems of organizational maintenance and improvement, and the techniques and strategies of instructional leadership and improvement.

EDAD 671 Seminar on Managing the Elementary School (2) Prerequisite: EDAD 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.

EDAD 672 Seminar on Managing the Middle School (2) Prerequisite: EDAD 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.

EDAD 673 Seminar on Managing the Secondary School (2) Prerequisite: EDAD 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.

EDAD 680 Internship in Educational Administration (1-9) Course may be repeated for credit. Advisor and department chair approval required. Involves part- or full-time administrative assignments in educational organizations, under joint supervision. S/U grade.

EDAD 690 Practicum on Management of Change (1-3) Prerequisites: EDAD 630 and consent of instructor. Course may be repeated for credit. In actual organization setting, determine need for change; plan, initiate, and implement change; evaluate effects of change. S/U grade.

EDAD 699 Thesis in Educational Administration (1-6) Research on a major problem in educational administration. Optional for M.A. students on recommendation of major advisor. S/U grade.

EDAD 701 Specialist Report (5) Solve an important practical problem in an educational organization and write a report of the investigation. Required of all candidates for the specialist degree in educational administration. Approval of major advisor required. S/U grade.

EDAD 740 Special Program in Educational Administration (3) Investigate a variety of topics or problems in the administration of educational organizations, such as communications, staffing, curriculum improvement, finance, organizational efficiency, role conflict. Six consecutive seminars at three hours each. By invitation of department.

EDAD 744 Seminar on Organization and Administrative Theory (3) Study organizations using a systems model and analyze various theories of organization/administrative behavior. Survey research methodology related to administrative problems.

EDAD 745 Seminar on Executive Leadership (3) Study effective styles of leader behavior in organizations with special emphasis on the functioning of policy making and governing groups and removing barriers to change.

EDAD 780 Practicum on Systems Analysis (1-3) Assist an educational agency in solving problems of management structure, information flow, policy development, allocation of decision responsibility, etc., by applying theory. Permission of instructor required. S/U grade.

EDAD 781 Practicum on Information Systems (1-3) Assist an educational agency in solving problems of internal or external communication through application of communication theory. Permission of instructor required. S/U grade.

EDAD 782 Practicum on Facility Planning (1-3) Assist an educational agency in projecting long-term facility needs and developing plans to meet those needs. Permission of instructor required. S/U grade.

EDAD 783 Practicum on Resource Planning (1-3) Assist an educational agency in developing plans for program improvement, resource enhancement, resource allocation, cost analysis, or budget control. Permission of instructor required. S/U grade.

EDAD 784 Practicum on Educational Agencies (1-3) Assist an educational agency in analyzing total operational effectiveness and applying techniques of operations research to agency management. Permission of instructor required. S/U grade.

EDAD 797 Doctoral Proposal Research (1-4) Write an approved proposal for a doctoral dissertation in educational administration. Must earn total of 4 hours of credit before admission to candidacy. Approval of major advisor required. S/U grade.

EDAD 799 Doctoral Dissertation in Educational Administration (1-12) Prerequisite: EDAD 797. Approval of research advisor required. Complete research of a major problem in educational administration or educational organizations. Must earn total of 12 hours of credit. S/U grade.

Elementary Education: Early Childhood

EDEC 231 Development of Infants and Toddlers (3) Required lab arranged. Investigate growth patterns from conception through infancy and the third year. Include influences on early development, guidance, and care provision, and adults' responsibilities for providing favorable environment. Observe infants and toddlers.

EDEC 233 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 308 Early Childhood Workshop (1-10) Study problems in early childhood education. Area covered in any one workshop determined by subtitle. No subtitle may be repeated for credit. S/U grade.

EDEC 333 Development and Guidance of Young Children (3) (2 lecture, 2 lab) Required lab 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 422 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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: Provisional or full admission to PTE, EDEC 333, or consent of instructor. Juniors/seniors only. Taken concurrently with EDLS 360. Theories and practices for the education of primary aged children, with an emphasis on curricular organization, content, methodology, and scheduling.

EDEC 462 Classroom Management in Early Childhood (3) Prerequisites: Provisional or full admission to PTE. Juniors/seniors only. Examine those components of effective classroom management procedures with young children. Topics include theoretical perspectives on discipline, the selection of rules and procedures, maintenance of appropriate behavior, and management of student work.

EDEC 463 Diagnostic Teaching in Early Childhood (3) Prerequisites: Full admission to PTE. 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 Early Childhood Workshop (1-10) Study problems in early childhood education. Area covered in any one workshop determined by subtitle. No subtitle may be repeated for credit. S/U grade.

EDEC 539 Issues in Parent-Teacher-Child Relationships (3) Examine current problems facing parents and suggest solutions based on critical reading and discussion. Emphasize comparative techniques in child rearing.

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.

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.)

EDEC 648 Psycholinguistics in Early Childhood (2) Designed to acquaint the student with the language development of the young child. Attention given to the nature of English, language acquisition, and instructional implications and applications.

EDEC 660 Critical Issues in Early Childhood (3) Investigate trends and issues concerning the young child, stressing curriculum and sound education policies, as well as issues of compelling contemporary significance.

EDEC 662 Research and Teaching 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 which includes research, field settings, discussions, and contemporary issues.

EDEC 667 Cultural Diversity in Early Childhood (3) Examine the broad range of cultural diversity in early childhood education, including language, ethnicity, socioeconomic level, gender and exceptionality. Focus on educational consideration for meeting needs based on diversity.

EDEC 675 Play and Psychosocial Development in Early Childhood (3) Focus on theories of play in socio-drama, therapy and cognition. Motor, emotional, and psycho-social development explored. Play of successive development phases and individual meaning for each child emphasized.

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 grade.

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. This practicum may be repeated for a maximum of six credits.

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. May be repeated for maximum of 6 hours. S/U grade.

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 grade.

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 grade.

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. Workshop subtitle may be repeated for credit. S/U grade.

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. May be repeated up to maximum of 8 semester hours.

EDEL 420 Effective Instruction in Elementary School Mathematics (3) Prerequisites: Full admission to PTE or certification at undergraduate level. 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.)

EDEL 440 Effective Instruction in Elementary School English/Language Arts (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Examines the nature and acquisition of English as a basis for effective instruction in handwriting, spelling, and 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) Prerequisites: Full admission to PTE or certification at undergraduate level. 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 472 Seminar for Student Teachers (3) Prerequisites: Full admission to PTE or certification at undergraduate level; EDFE 444; and instructor consent. Explore topics and issues in education which affect daily classroom work and professional career. S/U grade.

EDEL 500 Orientation to Certification in Elementary, Middle School, Reading, and Early Childhood (1) An investigation of current certification standards in elementary, middle school, reading, early childhood. Special attention will be paid to teacher preparation programs as they relate to certification.

EDEL 502 Improvement of Instruction Through Supervision at the Elementary and Middle School Levels (2) Development of strategies to improve instruction through a variety of supervisory procedures and instructional modes. S/U grade.

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. May be repeated up to maximum of 8 semester hours.

EDEL 508 Elementary Education Workshop (1-10) Study problems in elementary education area covered in any one workshop determined by subtitle. No subtitle may be repeated for credit. S/U grade.

EDEL 520 Effective Instruction in Elementary School Mathematics (3)
Prerequisite: Concurrent with EDRD 509 and EDRD 510; full admission to PTE or certification at undergraduate level. 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)
Prerequisite: Full admission to PTE or certification at undergraduate level. Examines the nature and acquisition of English as a basis for effective instruction in handwriting, spelling, and 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)
Prerequisites: Concurrent with EDEL 540 and EDFE 370; full admission to PTE or certification at undergraduate level. 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 572 Seminar for Student Teachers (3)
Prerequisites: Full admission to PTE or certification at undergraduate level, consent of instructor, and EDFE 444. Explore topics and issues in education which affect daily classroom work and professional career. S/U grade.

EDEL 601 Practicum (1-3) Open only by invitation to resident graduate students. May be repeated with various subtopics for a maximum of 6 credit hours. Supervised professional activity in elementary education, approximately two hours per day. 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 619 Pluralism in Education (3)
Prerequisite: Full admission to PTE or certification at undergraduate level. 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.)

EDEL 645 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 678 Outcomes-Based Education (3)
Intense study of Mastery Teaching and Teaching/Learning Cycle in understanding similarities and differences between these concepts.

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 grade.

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. This practicum may be repeated for a maximum of six credits.

EDEL 710 Seminar I: Planning the Research Process (1)
Prerequisites: EPRE 600 or equivalent required in previous master's program. To be taken concurrently with EPRE 505. Identification of a problem worthy of study in a research project and preparation of a course paper summarizing the research problem. S/U grade.

EDEL 711 Seminar II: Planning the Research Process (1)
Prerequisites: EDEL 710 and EPRE 505. In-depth study of research techniques and methods, and guidance in planning and writing a proposal for research at and beyond the doctoral level. S/U grade.

EDEL 725 Seminar in Elementary School Mathematics (2)
Prerequisites: EDEL 520 or 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 grade.

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 grade.

EDEL 755 Seminar in Elementary Education Social Studies (2)
Prerequisites: EDEL 550 or 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, and curriculum development and evaluation. S/U grade.

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. May be repeated for maximum of 6 semester hours. S/U grade.

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 grade.

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 grade.

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. Area covered in any one workshop is indicated in subtitle. No subtitle may be repeated for credit.

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. No subtitle may be repeated for credit.

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.)

EDF 508 Workshop in Foundations of Education (1-4)
Area to be covered in any one workshop is determined by workshop subtitle. No subtitle may be repeated for credit.

EDF 513 Professional Renewal (1-9) Various topics offered, depending on interest of instructor and students. Each course is subtitled, and no subtitle may be repeated for credit.

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.)

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. No subtitle may be repeated for credit.

Educational Field Experiences

EDFE 170 Introduction to Field Based Experience (1-3) May be repeated. Prerequisite: 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 grade.

EDFE 270 Field Based Experience (2) Prerequisite: Instructor consent. 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 grade.

EDFE 370 Advanced Field Based Experience (1-3) May be repeated. Prerequisites: Full admission to PTE or certification at the undergraduate level, instructor consent, EDFE 270. 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 grade.

EDFE 401 Practicum (1-3) Prerequisite: Full admission to PTE or certification at the undergraduate level. 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 grade.

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.)

EDFE 444 Supervised Teaching (1-18) Prerequisite: Full admission to PTE or certification at the undergraduate level. 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 grade.

EDFE 445 Advanced Supervised Teaching (1-18) Prerequisite: Full admission to PTE or certification at the undergraduate level, EDFE 444. Available to students who have completed minimal supervised teaching requirement for certification but who need or wish to improve teaching techniques with additional field experience. May be repeated only with permission of instructor. Portfolio required. S/U grade.

EDFE 501 Practicum (1-3) May be repeated. Prerequisite: Full admission to PTE or certification at undergraduate level. 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 grade.

EDFE 601 Practicum (1-3) Prerequisite: Full admission to PTE or certification at undergraduate level. 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 grade.

EDFE 610 Field Experience (1-18) Prerequisite: Full admission to PTE or certification at graduate level 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 grade.

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.)

EDFE 640 Supervision of Educational Field Experience (2) Prerequisites: Previous teacher certification. 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 grade.

Educational Field Experience: Laboratory School

EDLS 360 Clinical Experience: Primary (1-3) Prerequisites: Instructor consent with full admission to PTE or certification at the undergraduate level. For Early Childhood/Elementary Education majors. Minimum of 30 contact hours with level K-3 children for each hour of credit. Weekly seminar at 3:20 p.m. Thursday. Students videotaped.

EDLS 361 Clinical Experience: Intermediate (1-3) Prerequisites: Instructor consent with full admission to PTE or certification at the undergraduate level. Professional development for intermediate Elementary Education majors. Minimum of 30 contact hours with level 4-6 children for each hour of credit. Weekly seminar at 3:30 p.m. Tuesday. Students videotaped.

EDLS 362 Clinical Experience: Middle School (1-3) Prerequisite: Full admission to PTE or certification at the undergraduate level and instructor consent. Professional development for Middle School majors. Minimum of 30 contact hours with level 6-8 children in a specific area for each hour of credit. Weekly seminar. Students videotaped.

EDLS 363 Clinical Experience: Secondary (1-3) Prerequisite: Full admission to PTE or certification at the undergraduate level, instructor consent. Professional development for secondary majors. Minimum of 30 contact hours with level 7-12 children in a specific area for each hour of credit. Weekly seminar. Students videotaped.

EDLS 365 Advanced Clinical Experience (1-3) Prerequisites: Instructor consent with full admission to PTE or certification at the undergraduate level and, previous clinical experience. Enhance personal and professional development through selected classroom experiences. Minimum of 30 contact hours with children for each hour of credit. Weekly conference. Available videotaping.

Elementary Education: Middle School

EDMS 302 Orientation to Middle School (3) Full admission to PTE or certification at undergraduate level. 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. Each workshop has a subtitle, and no subtitle may be repeated for credit. S/U grade.

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.)

EDMS 508 Middle School Workshop (1-10)

Concentrate on instructional problems of participants, with problems attacked varying with experts conducting workshops. Each workshop has a subtitle, and no subtitle may be repeated for credit. S/U grade.

EDMS 513 Professional Renewal

Experience (1-4) Discover skills, knowledge and problems of educators, with area to be covered in any one course determined by subtitle. No subtitle may be repeated for credit. S/U grade.

EDMS 601 Practicum (1-3)

Open only by invitation to resident graduate students. Supervised professional activity in participant's interest area approximately 2 hours per day. Two copies of a well-written paper must be filed with instructor before credit is given. S/U grade.

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.)

EDMS 660 Middle School Integrated

Science and Mathematics (3) Study how the content in the fields of Science and Mathematics might be integrated and applied to the middle school classroom.

EDMS 662 Middle School Integrated Social

Science and Language Arts (3) Study how the content in the fields of Social Sciences and Language Arts might be integrated and applied to the middle school classroom.

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 Elementary and 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 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. May be repeated for maximum of 6 semester hours. S/U grade.

Elementary Education: Reading

EDRD 103 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.

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 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. No subtitle may be repeated for credit. S/U grade.

EDRD 401 Practicum in Reading (1-3)

Open only by invitation to resident undergraduate students. Supervised professional activity in reading (approximately two hours per day). A well-written paper must be filed with instructor before credit is given.

EDRD 410 Achieving Effective Instruction in

Developmental Reading (3) Full admission to PTE or certification at undergraduate level. Accompanied by EDRD 409. 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) Consent of instructor. 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 412/512 Content Reading and Writing

in the Elementary and Middle School (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Develop understanding of cognitive and affective needs of elementary and middle school students in developing literacy in the content areas. Examine related instructional strategies. Participate in related field experiences.

EDRD 414/514 Literature for Children,

Adolescents, and Young Adults (3) Prerequisites: Full admission to PTE or certification at undergraduate level. 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 415/515 Current Trends and Issues in

Reading/Language Education (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Develop student's awareness of trends and issues in reading instruction and emphasize their professional responsibility to keep abreast through reading, research, and/or involvement in professional organizations.

EDRD 418 Communication Skills in a High-

Tech Society (2) Focus on present and future use of technology and its impact on literacy and the teaching of reading. Discussions on developing critical communication skills in a high-tech society.

EDRD 419 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 420 Reading in the Secondary School

(2) Prerequisites: Full admission to PTE or certification at undergraduate level. Investigate reading theory, develop concept of reading to learn and an understanding of the developmental reading skills necessary in content areas, and develop sensitivity to individual differences in reading ability.

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.)

EDRD 508 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. No subtitle may be repeated for credit. S/U grade.

EDRD 510 Achieving Effective Instruction in

Developmental Reading (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Accompanied by EDRD 509. 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. Consent of instructor. Course will emphasize diagnosis leading to instruction through a variety of approaches toward the end of enabling teachers to select appropriate methods/materials.

EDRD 412/512 Content Reading and Writing

in the Elementary and Middle School (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Develop understanding of cognitive and affective needs of elementary and middle school students in developing literacy in the content areas. Examine related instructional strategies. Participate in related field experiences.

EDRD 414/514 Literature for Children,

Adolescents and Young Adults (3) Prerequisites: Full admission to PTE or certification at undergraduate level. 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 415/515 Current Trends and Issues in

Reading/Language Education (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Develop student's awareness of trends and issues in reading instruction and emphasize their professional responsibility to keep abreast through reading, research, and/or involvement in professional organizations.

EDRD 516 Teaching Reading to the Gifted

Reader (2) Prerequisites: Full admission to PTE or certification at undergraduate level, and consent of instructor. The focus of this course is on the development of materials and methods and programs for teaching reading to gifted readers.

EDRD 601 Practicum in Reading (1-3) Open only by invitation to resident graduate students. Supervised professional activity in reading (approximately two hours per day). A well-written paper must be filed with instructor before credit is given.

EDRD 612 Reading in the Elementary School (3) Prerequisites: Full admission to PTE or certification at undergraduate level. Study of the nature of reading instruction, K-6, as reflected by current research, teaching and evaluation methods and techniques; published and teacher prepared materials, and effective classroom management.

EDRD 614 Literature for Children, Adolescents and Young Adults (3) Prerequisites: Full admission to PTE or certification at undergraduate level. 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 617 Evaluation and Correction of Individual Reading Problems (4) Prerequisites: EDRD 612, EDRD 620, or equivalent. Develop an understanding of the educationally disabled reader in elementary and secondary school, including causation, diagnosis, and instruction. Required laboratory experiences arranged.

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) Prerequisites: Full admission to PTE or certification at undergraduate level. 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.)

EDRD 637 Teaching Reading at the College 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 Seminar in Reading Research: Theory, Practice, and Issues (3) Study research procedures and their application to education. Critique reading research and programs and practices. Develop and present group and individual reports.

EDRD 692 Clinical Practicum and Internship: Elementary/Secondary (4) Prerequisites: EDRD 617 and consent of instructor. Teach 3-5 elementary/ secondary disabled readers for five sessions a week. Conduct and/or attend diagnostic sessions, seminars, case studies, current research, diagnostic/ instructional strategies. May be completed at each level.

EDRD 694 Reading Center Internship: College Reading, Literacy, Supervision (2) Prerequisites: EDRD 617. Consent of instructor. Separate practicums in each area may be taken for 2 credits each for a maximum of 6 credits. Experiences are individually defined. S/U grade.

EDRD 699 Thesis (1-12) Optional for Master of Arts programs on recommendation of major advisor. Successful completion of a formal thesis paper and oral defense required. S/U grade.

EDRD 701 Advanced Practicum in Reading (1-4) Open only by invitation to resident doctoral students. Supervised professional activity in Reading. A well-written paper must be filed with the supervising instructor before credit is graded. May be repeated for a maximum of 6 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) Prerequisites: EDRD 612 or 620; EDRD 617 and EDRD 692 and consent of instructor. Refine diagnostic/instructional skills through study of advanced diagnostics, instructional techniques, and related research; assist in Center for Literacy Development; laboratory experience required.

EDRD 745 Topical Seminar in Reading (2-4) Analyze historical and current research, trends, and issues in reading. To pursue individual research topics which will vary according to student interest.

EDRD 750 The Contributing Professional in Reading (2-4) 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. May be repeated for maximum of 9 credit hours. S/U grade.

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 grade.

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 grade.

Special Education

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.

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 which 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. 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. Full admission to PTE. 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 and full admission to PTE. 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 (4) Prerequisites: Full admission to PTE. 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 (4) Prerequisites: EDSE 400 and full admission to PTE or certification at undergraduate level. This course 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) Prerequisites: Full admission to PTE or certification at undergraduate level. 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 mainstreaming 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.

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.)

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 (3) Develop basic skills in manual communication of the hearing impaired through the use of sign language and fingerspelling.

EDSE 500 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 501 Learning and Development in Exceptional Individuals (3) Basic issues in learning and development related to exceptional individuals. Emphasizes relationships between learning and development and effects of maturation, environment, and heredity on physical, cognitive, affective, and language development.

EDSE 502 Educational Interventions for Meeting the Needs of the Exceptional Individual (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 503 Assessment of Exceptional Individuals (3) Explore issues in assessment related to exceptional children. Emphasis placed on principles, purposes, and processes of assessment related to programming in special education.

EDSE 506 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 in Special Education (1-3) Studies of special disability areas designated when each workshop is offered. Includes current issues, problems, programs, and topics of national and local interest.

EDSE 513 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.

EDSE 520 Survey of Learners with Profound Needs (3) The course 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. The course 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 (4) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 400 or EDSE 520. Different methodological approaches to serving individuals with profound needs are provided. Teaching strategies, consultation techniques, and accessing multiagency resources is emphasized.

EDSE 523 Methods of Teaching Learners with Profound Needs 9 to Adult (4) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 400 or EDSE 520. This course includes approaches to serving students with profound needs at the prevocational/vocational levels of instruction. Emphasis is 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. This course is designed to synthesize experience and course work 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) The course 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 (6-12) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 521, EDSE 522, EDSE 523. The practicum 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 grade.

EDSE 530 Parent/Professional Partnerships (3) Prerequisite: EDSE 520. This course 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 532 Communication and Language for Early Childhood Special Education (3)

Prerequisites: EDSE 500/501/502/503. Development of verbal/nonverbal communication, receptive/expressive language skills of young children with special needs. Includes developmental approaches, strategies, materials and techniques to develop functional communication and language.

EDSE 533 Methods in Early Childhood Special Education (3) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500/501/502/503. The course 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: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502, EDSE 503. 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 ECSE. S/U grade.

EDSE 540 Independent Living for the Visually Handicapped (1-2) Required lab arranged. Gain ability to understand the use of adapted materials and techniques in teaching independent living to the visually impaired. Emphasis given to recreational areas.

EDSE 542 Assessment and Methods for Teaching Multi-Impaired Visually Handicapped (4) Prerequisites: Full admission to PTE or certification at undergraduate level. Discuss causes, characteristics, educational implications and methodology specific to MHVI. Learn systematic design of instruction procedures, collaborative and multidisciplinary team planning strategies.

EDSE 543 Braille Codes and Formats (1-2) Required lab arranged. Study special braille codes: literacy, mathematical and scientific notation, music and foreign languages; textbook formats for braille, large type, and recorded transcriptions; learn techniques of teaching braille reading.

EDSE 544 Technology in the Education of the Visually Handicapped (2) Learn to operate and to teach the use of technological devices including closed circuit television readers, optacon, abacus, versabril, and computer adaptations.

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) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 546. Consent of instructor required. Required lab 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.

EDSE 549 Rehabilitative Teaching of the Visually Handicapped (3) Prerequisites: Full admission to PTE or certification at undergraduate level. 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 550 Advanced Sign Language (3) Prerequisite: EDSE 451. Increase signing proficiency. Learn other sign language systems, correct signs for classroom teaching, conversation and interpreting for the deaf.

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: Full admission to PTE or certification at undergraduate level; EDSE 580, EDSE 581, EDSE 582. Emphasize actual teaching and facilitation of the gifted and talented in actual supervised teaching experiences.

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 g/t students the 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 600 Consultation Skills for Special Educators (3) Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503 or consent of instructor. Principles and techniques of collaborative consultation including effective communication practices, conflict resolution, interviewing, problem solving, decision making, and provision of inservice programs. Emphasizes theoretical and practical considerations of teacher consultation.

EDSE 601 Instructional Methods for Students with Moderate Needs (3) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502, EDSE 503. Methods, techniques, and materials to use with moderate needs students for teaching academic and vocational skills. How to adapt instruction and special equipment/devices will be included in the course.

EDSE 602 Classroom Management (3) Application and analysis of behaviorist, socio-teleological, and developmental theories of classroom management for exceptional students in regular classrooms, resource rooms, and self-contained special education programs.

EDSE 603 Practicum with Moderate Needs Students (6-12) Prerequisites: EDSE 600, EDSE 601, EDSE 602; full admission to PTE or certification at the undergraduate level and Special Education core: EDSE 500, 501, 502, and 503. Supervised practica in programming for and teaching moderate needs students including assigned seminar topics. S/U grade.

EDSE 606 Methods of Teaching Severe Communication, Affective, and Cognitive Needs Students, K-12 (3) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502, EDSE 503. Teaches about major current techniques, methods, philosophies, and trends in teaching communication, affective, and cognitive needs students with severe handicaps, K-12.

EDSE 607 Functional Curriculum and Community Based Instruction (3) Prerequisites: EDSE 500, EDSE 501, EDSE 502, EDSE 503. Course addresses how to develop and implement functional curriculum writing a variety of integrated environments. Includes information on transitions, vocational options, social/interpersonal skills, and independent living skills.

EDSE 608 Case Studies in Severe Affective, Communication and Cognitive Needs (3) Prerequisites: EDSE 500/501/502/503. Consent of instructor required. Required lab arranged. Applied experience in assessment and teaching of exceptional individuals with affective, communication, and cognitive needs. Work a minimum of 45 clock hours one-on-one with exceptional individual in school or clinical settings.

EDSE 609 Language Disorders of Students with Severe Affective, Cognitive and Communication 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 communication needs. Focuses on the language of students with affective, cognitive, and communication 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 course work 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; Permission of major advisor; and full admission to PTE or certification at undergraduate level. 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 grade.

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 course work 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.)

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; permission 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 grade.

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. Permission 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 grade.

EDSE 625 Practicum with Students with Severe Cognitive Needs, Ages 13-21 (3-12) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Permission 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 grade.

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 course work 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; permission 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 grade.

EDSE 632 Practicum with Learning Disabled Students, Ages 5-12 (1-12) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Permission 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 grade.

EDSE 633 Practicum with Learning Disabled Students, Ages 13-21 (1-12) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 500, EDSE 501, EDSE 502 and EDSE 503. Permission 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 grade.

EDSE 641 Visually Handicapped Medical and Educational Implications (1-3) Discuss anatomy/physiology of the eye, medical and educational assessment of low vision and functional implications of various eye conditions. Explore techniques to stimulate and improve use of functional vision.

EDSE 642 Advanced Seminar in Education of Visually Handicapped (3) Study role of VH teacher, specific VH assessments, compensatory skill methodology, IEP development, appropriate placements, sourcing materials and equipment, administrative duties, consulting techniques, and coordination of volunteers for program effectiveness.

EDSE 643 Psychosocial Needs of Visually Handicapped (2) Study the psychosocial implications of a visual impairment, sources of self-esteem, the adjusting process, and strategies for meeting the blindness-related counseling needs of visually impaired children and their parents.

EDSE 644 Practicum in Education of Visually Handicapped, K-12 (2-12) Prerequisites: Full admission to PTE or certification at undergraduate level; consent of instructor required; EDSE 542, EDSE 543, EDSE 544, EDSE 546, EDSE 641, and 643. Supervised teaching experience with visually handicapped, kindergarten through 12th grade, including children who are multiply impaired: planning and implementing lessons, preparing materials, participating in staffings, IEP development, and parent conferences.

EDSE 646 Practicum in Rehabilitative Teaching of the Visually Handicapped, K-12 (6-12) Prerequisites: EDSE 543, EDSE 546, EDSE 549, EDSE 641 and EDSE 643. Consent of instructor required. Supervised teaching experience with visually handicapped to include the development and implementation of strategies for teaching communication, personal and home management, social, and recreational skills either home- or center-based.

EDSE 647 Applied Methods in Orientation and Mobility (2) Prerequisites: Full admission to PTE or certification at undergraduate level. 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) Prerequisites: Full admission to PTE or certification at undergraduate level. Permission 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) Prerequisites: 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: Full admission to PTE or certification at undergraduate level; CMDS 370, EDSE 450. 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) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 450. 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) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 450. Consent of instructor required. Required lab 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) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 450. 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) Prerequisites: Full admission to PTE or certification at undergraduate level; EDSE 450. Consent of instructor required. 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: Full admission to PTE or certification at undergraduate level; EDSE 653, EDSE 654 and EDSE 656. Permission of major advisor required. Individual observation and supervised practice in the education of the severe hearing needs person, K-12.

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, 501, 502, and 503 or consent of instructor. Designed to synthesize experiences and course work 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) Prerequisites: 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 710 Research Seminar in Special Education (3) An analysis of studies and research pertaining to the education of exceptional children. Procedures for conducting and reporting research. A survey of critical problems and trends in special education.

EDSE 711 Trends in Special Education (3) Doctoral students only. Study historical development of educational programs for exceptional children and critically analyze issues and trends in the field.

EDSE 712 Seminar in Professional Writing (3) To develop an understanding of the importance of, and the procedures involved in professional writing, with emphasis on writing for publication in those journals which more often publish in the area of special education, and textbook publishers which publish widely in the area of special education.

EDSE 713 Internship in Special Education Administration (2-12) Supervised program of orientation, observation, and participation in one or more community agencies devoted to exceptional children. Specific experiences include administration, program development, and interagency relationships. The internship requires one full semester of field experience and is arranged on an individual basis. S/U grade.

EDSE 714 Supervised Practicum in College Teaching (3) This course provides experiences in observation and supervised practice in college teaching for doctoral candidates planning to teach on the college or university level. Observations and the teaching experiences will be used as a basis for the analysis of learning experiences. S/U grade.

EDSE 715 Advanced Seminar and Problems in Special Education Assessment (3) Prerequisite: EDSE 503. Critical evaluation of research and theory in assessment of special education populations. Development of unique theoretical perspectives as well as research skills in assessing special children and youth.

EDSE 716 Advanced Seminar in Mental Retardation (3) To review, discuss, analyze, and evaluate five major theories and/or conceptualizations of mental retardation, and to investigate the relationship of law and the principle of normalization to present approaches to dealing with mentally retarded individuals in the schools and in society.

EDSE 717 Advanced Seminar in Learning Disabilities (3) Review, analyze, and evaluate selected theoretical concerns that relate to learning disabilities.

EDSE 718 Advanced Seminar in Education of Acoustically Handicapped/Visually Handicapped (3) Investigation of the issues and trends in the education of acoustically handicapped and visually handicapped children and youth; focus on research, curriculum, instructional strategies, and other administrative concerns.

EDSE 719 Advanced Seminar in Gifted Education (3) Prerequisite: Consent of instructor. Doctoral seminar designed for learners to investigate and discuss current trends, issues and problems in gifted education and general education.

EDSE 797 Doctoral Proposal Research (1-4) Permission of major advisor. Required of all doctoral students. A student may register for 1-4 hours of this course in any semester, but must earn 4 hours of credits as a partial fulfillment of requirements for all doctoral degrees before admission to candidacy. S/U grade.

EDSE 799 Doctoral Dissertation (1-12) Permission of major advisor. Required of all doctoral candidates. A student may register for 1-12 hours of dissertation credit in any semester, but must earn 12 hours of credit for the dissertation as a partial fulfillment of requirements for any doctoral. S/U grade.

English Education

EED 301 Tutoring Strategies for Composition (1-2) Prerequisites: Sophomore standing, consent of instructor. After training in tutoring strategies, participants will spend thirty class hours per credit assisting in a composition class or writing lab to prepare for clinical and student teaching. May be repeated once.

EED 341/541 Methods and Materials for Teaching Language and Composition in the Secondary Schools (3) Prerequisite: Full admission to PTE or certification at undergraduate level. 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 of Teaching Literature in Secondary Schools (3) Prerequisite: Full admission to PTE or certification at undergraduate level. Prerequisite to student teaching. Selection of literature, use of media, curriculum and classroom organization, testing, evaluation, and materials in a secondary school program.

EED 403 Workshop in the Teaching of English (2-3) Prerequisite: Full admission to PTE or certification at the undergraduate level. Course may be repeated for a maximum of 9 credits. A series of workshops in special problems in the teaching of English, conducted by authorities of the field.

EED 406 Literature for Children and Adolescents (3) Reading material for a transition from children's literature to literature for adults. Attention concentrated on junior novels, junior biographies, their authors, and on trends and evaluation standards.

EED 502 The Teaching of Writing (3) Prerequisite: Full admission to PTE or certification at undergraduate level or consent of instructor. Methods of improving student writing. May be taken for up to a total of 9 semester hours under different subtitles.

EED 341/541 Methods and Materials for Teaching Language and Composition in the Secondary School (3) Prerequisite: Full admission to PTE or certification at undergraduate level. Prerequisite to student teaching. Methods and materials for teaching language and composition in the secondary schools. Teaching techniques are a point of emphasis.

EED 602 Seminar in Literature for Adolescents (3) Prerequisite: PTE or certification at undergraduate level. Books written for adolescents, with emphasis upon junior novels and biographies. Consideration of reading guidance based upon student interests and needs. Development of criteria for evaluating literature for adolescents.

EED 603 Reconstructing the English Curriculum (3) Prerequisite: Full admission to PTE or certification at undergraduate level. The place of English in the curriculum of the secondary school, with a consideration of appropriate materials and their use.

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.

English

ENG 106 Word Power (3) The acquisition of new words and the effective use of them through care and taste; includes levels of usage; urges specific rather than general expression, fresh rather than trite diction.

ENG 120 Elementary Composition: Fundamentals (3) Prerequisite: Consent of instructor. Practice all stages of the composing process, review conventions of standard English, and learn several rhetorical patterns useful for personal and academic writing.

ENG 122 Elementary Composition: Exposition (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 125 Communications on a Theme (3) Prerequisite: ENG 122. Topics for writing chosen from ideas of historical influence and/or contemporary problems. May be repeated under different sub-title once (total 6 semester hours).

ENG 127 Basic 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 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 135 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, 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. Course may be repeated under various subtitles for a total of 9 credits.

ENG 225 Language and the History of English (3) A survey of general linguistics as applied to the history of the English language. Includes vocabulary and dictionary study, regional and social dialects, semantics and pragmatics, childhood acquisition of language.

ENG 231 Great Writers in England or America (3) Course may be repeated for a maximum of 9 credits. The in-depth study of one English or American writer not featured elsewhere. Subject of the course determined by subtitle. No subtitle may be taken more than once for credit.

ENG 235 World in Literature (3) Course may be repeated for a maximum of 9 credits. Variable content course studying literature of countries predominantly other than England or America. Readings may be thematic, comparative, geographic, generic. No subtitle may be taken more than once for credit.

ENG 238 Introduction to Folklore (3) Course may be repeated under different subtitles for a maximum of six credits. 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.

ENG 239 Topics in Women's Literature (3) An investigation, from a feminist perspective, of writing by or about women. Figures, nationalities, genres, and periods will vary with subtitles. The course may be repeated for a maximum of 9 credits; no subtitle may be taken more than once for credit.

ENG 240 Introduction to Creative Writing (3) Introduction to techniques in writing fiction, poetry, or for theater, film, and television. Course may be repeated under different subtitles for a maximum of 9 hours credit.

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 English literature from the beginning to the present. Emphasize 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 American literature from the beginning to the present. Emphasize 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) Course may be repeated under different subtitles for a maximum of 9 credits. Study 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.

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. Course may be repeated under different subtitles for a maximum of 9 credits.

ENG 310 Major Writers of English Literature (3) Course may be repeated under different subtitles for a maximum of 9 credits. In-depth study of the works of a single writer.

ENG 318 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 319 Advanced Expository Techniques (3) Prerequisite: ENG 122. Reading, writing, and formal analysis of various prose pieces and study of logical fallacies in ancient and modern political writing.

ENG 325 Studies in Fantasy and Science Fiction (3) Different approaches to the literature of wonder, including concentration on a particular writer, a theme such as women in science fiction, or a historical study of the genre.

ENG 335/535 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. Course may be repeated under different subtitles for a maximum of 9 credits; subtitles: Poetry, Fiction, Drama.

ENG 361 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 362 Renaissance Literature (3) English poetry and prose of the Renaissance. Selections from such authors as Spenser, Jonsen, Marlowe, Bacon, the Metaphysical poets, Milton, and the chroniclers.

ENG 363 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 364 Nineteenth Century English Literature (3) A study of the major Romantic and Victorian writers and their themes. Special emphasis upon intellectual currents of the 19th Century as reflected in the poetry and prose.

ENG 365 Twentieth Century English Literature (3) Selected reading from authors such as Shaw, Joyce, Woolf, Yeats, Thomas, Lessing, and Fowles to bring out themes and intellectual currents of the present century.

ENG 371 American Literature through the 19th Century (3) Careful study of major writers and literary movements from the Puritan period up to 1900.

ENG 372 American Literature of the 20th Century (3) Careful study of major writers and literary movements from 1900 to the present.

ENG 402. The Short Story (3) Analysis of modern short stories. **ENG 403/503 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 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) Some of the formal aspects of poetry (prosody, stanzaic and "named" forms) of types (lyric, narrative, dramatic), and of the poets' use of language.

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.

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.)

ENG 430/530 Advanced Studies in World Literature (3) Course may be repeated under different subtitles for a maximum of 9 credit hours. An investigation of a theme, form or problem that cuts across period and nationalities.

ENG 441 Colloquium in Literature (3) Course may be repeated for a maximum of 9 credits. One great work of literature or a small group of such masterpieces which are closely related either in form or idea. No subtitle may be taken more than once for credit.

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.

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. Course may be repeated under different subtitles for a maximum of 9 credits.

ENG 510 Advanced Placement Program-English (3) 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.

ENG 513 Professional Renewal (1-9) Study of various topics which would be of particular interest to the English, or other, professional. The topic will depend upon the instructor.

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 430/530 Advanced Studies in World Literature (3) An investigation of a theme, form or problem that cuts across period and nationalities.

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. May be repeated for up to 9 hours credit under different subtitles.

ENG 594 Practicum in the Teaching of College Composition (4) Prerequisite: 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.)

ENG 623 Studies in Old English (3) Course may be repeated for a maximum of 9 credits. 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.

ENG 624 Studies in Middle English (3) Course may be repeated for a maximum of 9 credits. 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.

ENG 625 Studies in the Renaissance (3) Course may be repeated for a maximum of 9 credits. Seminars in various ideas of the period, genres (drama, prose, and poetry), and representative authors.

ENG 626 Studies in Restoration and 18th Century (3) Course may be repeated for a maximum of 9 credits. Seminars in various ideas of the period, genres (criticism, drama, fiction, and poetry), and representative authors.

ENG 627 Studies in the Romantic Period (3) Course may be repeated for a maximum of 9 credits. Seminars in the origin, purpose, nature of the Romantic Movement, focusing on two or more representative authors.

ENG 628 Studies in the Victorian Period (3) Course may be repeated for a maximum of 9 credits. Seminars in various genres (criticism, drama, fiction, and poetry), representative authors.

ENG 629 Studies in 20th Century British Literature (3) Course may be repeated for a maximum of 9 credits. Seminars in various ideas of the period, genres (criticism, drama, fiction, and poetry), and representative authors.

ENG 630 Studies in American Literature (Beginnings to Civil War) (3) Course may be repeated for a maximum of 9 credits. Seminars in various genres (criticism, drama, prose, and poetry), ideas, and representative authors.

ENG 631 Studies in American Literature (Civil War to W.W.I) (3) Course may be repeated for a maximum of 9 credits. Seminars in various genres (criticism, drama, fiction, and poetry), ideas, and representative authors during the late 19th century and early 20th century.

ENG 632 Studies in American Literature (W.W.I to the Present) (3) Course may be repeated for a maximum of 9 credits. Seminars in various genres (criticism, drama, fiction and poetry), ideas, and representative authors during the mid 20th century.

ENG 633 Studies in Linguistics (3) Course may be repeated for a maximum of 9 credits. Seminars in various topics ranging from the evolution of English from its beginnings to dialectology, semantics, stylistics, and psycholinguistics.

ENG 635 Studies in World Fiction (3) Course may be repeated for a maximum of 9 credits. Seminars in various short stories and novels in translation to illustrate a generic or ideological approach to fiction beyond Britain and the United States.

ENG 636 Studies in World Poetry (3) Course may be repeated for a maximum of 9 credits. 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.

ENG 637 Studies in World Drama (3) Course may be repeated for a maximum of 9 credits. Seminars in various plays in translation to illustrate a generic or ideological approach to drama beyond Britain and the United States.

ENG 638 Studies in Literary Criticism (3) Course may be repeated for a maximum of 9 credits. 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.

ENG 639 Colloquium in Literature (3) Course may be repeated for a maximum of 9 credits. 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.

ENG 699 Thesis/Creative Project (1-10)
Proposals must be approved by the student's major advisor and the Dean of the Graduate School.

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 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.)

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.

ENST 513 Professional Renewal (1-6) Investigate a variety of Environmental topics. Each course subtitled and none may be repeated for credit.

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 required. May be repeated for a maximum of 8 credits. 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 grade.

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.)

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. Course may be taken a maximum of three times under different subtitles.

EPRE 508 Workshop (1-3) Condensed presentation of special topics. Topics vary. Course may be taken a maximum of three times under different subtitles.

EPRE 513 Professional Renewal (1-9) Update skills and knowledge in educational psychology. Topics vary. Course may be taken under different subtitles up to three times for a maximum of 12 credits.

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) Theories and principles of learning and their applications to teaching and learning situation.

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 complete statistics packages.

EPRE 603 Analysis of Variance (3) Continuation of EPRE 602. Review on 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 Packages for Educational Research (3) Prerequisite: EPRE 603. Learn the use of statistical software libraries for analyzing data collected from a variety of research designs. Topics include ANOVA designs, multiple regression and factor analysis, and MANOVA.

EPRE 615 Seminar in Applied Behavioral Analysis (3) Prerequisite: EPRE 600, EPRE 602, or equivalents. Assumptions and research underlying single subject-research design and methodology.

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.)

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 Professional Issues in Educational Psychology/Technology (1) Majors only. Issues and policies, including current research, impact and importance of professional organizations and journals, and ethical standards. S/U grade.

EPRE 663 Apprenticeship (1-3) Prerequisite: Consent of instructor required. May be repeated for a maximum of 9 credits. 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 grade.

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 602. 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 681 Learning and Cognitive Processes (3)

Prerequisite: EPRE 540. An extensive review and analysis of contemporary theory and research in the areas of human learning, memory, reasoning, and problem solving.

EPRE 682 Cognition and Instruction (3) Prerequisite: EPRE 540. Survey of research in cognitive psychology related to instruction in the basic skills and other subject matter. Emphasis is given to instructional innovations derived from theory and research.

EPRE 684 Advanced Seminar in Human Development (3) Prerequisites: EPRE 630; and 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. May be repeated 3 times for a total of 9 credits.

EPRE 685 Advanced Seminar in Learning and Cognition (3) Prerequisites: EPRE 540 and EPRE 681 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. May be repeated for up to 9 hours of credit.

EPRE 692 Internship in Educational Psychology, Research and Evaluation (1-9) Consent of instructor required. May be repeated for a maximum of 18 credits. 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 grade.

EPRE 694 Practicum (1-9) Consent of instructor required. May be repeated for a maximum of 18 credits. 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.

EPRE 695 Special Topics in Educational Psychology (1-3) Specialized topics or contemporary issues. Topics vary. Course may be taken a maximum of three times under different subtitles.

EPRE 699 Thesis (1-9) Maximum of 9 credits may be taken. 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 grade.

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 may register for 1-4 hours in any semester, but must earn 4 hours as partial fulfillment of requirements for the doctorate. Check with the Graduate School regarding appropriate procedures and formats. S/U grade.

EPRE 799 Doctoral Dissertation (1-12) Register for 1-12 hours in any quarter. 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 grade.

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.

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.

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.

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.

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. Course may be repeated with different topic.

ESCI 697 Graduate Research (1-8) Consent of instructor. Qualified graduate students select and research a problem and present professional quality written report. May be repeated, but total credit hours may not exceed eight.

ESCI 699 Thesis (1-10) Intensive study of selected earth sciences topic under the direction of student's graduate studies committee. Course may be repeated, but total may not exceed 10 hours.

English as a Second Language

ESL 250 English for Foreign Students (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.

ESL 251 Writing for Foreign Students (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.

Educational Technology

ET 100 Computer Applications for Composition (1) Taken concurrently with composition classes. Word processing and spellchecking as tools to improve students writing process. Includes data based management, CAI tutorials in grammar and punctuation.

ET 401 Classroom Applications of Educational Technology (2) Provisional or full admission to PTE. 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.)

ET 425 Computer Applications in Education (3) Computer applications as they apply in educational settings. Course content includes spreadsheet, word processing, data base applications and the essentials of programming and operating systems.

ET 495 Special Topics in Educational Technology (1-3) Prerequisite: Consent of instructor. Scheduled on irregular basis. Explore special topics in Educational Technology. An appropriate subtitle will explain each course.

ET 500 Introduction to Performance Technology (3) Development of Technology and its impact upon society. Also includes discussion of systems in Technology (management, communications, learning, instructional delivery) and describes their impact upon the process of education.

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 Computer Based Education (3) A survey course of computer systems, programming languages architecture, operating systems, computer literacy and educational applications. Includes types of classroom programs, software application and history of instructional computing.

ET 504 Instructional Materials Design (3) Procedures for designing and developing instructional materials. Includes scripting and production specifications for graphic audio and photographic slide/tape formats.

ET 508 Workshop: Subtitle (1-3) Special topics in Educational Technology studied in workshop format. Topic selection based on current needs of the educational community. Topics constitute workshop subtitles, no subtitle may be repeated for credit.

ET 513 Professional Renewal (1-4) Update and review professional skills and knowledge. Specific Topics are indicated by subtitle.

ET 524 Authoring Systems (3) A study of the authoring systems/languages used for computer based delivery on the micro, mini and mainframe systems. Experience in learning system protocol and creating sample lessons/ tests.

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 online 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) Prerequisites: ET 401, ET 504 and consent of instructor. 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 580 Microprocessor Systems (3) (2 lecture, 1 laboratory) Covers essential components of microprocessors and microcomputers. Laboratory course with experimental activities using integrated circuits discrete components, registers, memories and arithmetic logic. Deals with systems compatibility.

ET 602 Instructional Analysis and Design (3) Application of contemporary theories of learning and instruction to systematic instructional development. Includes research foundations and current issues and trends of instructional analysis, design and evaluation.

ET 610 Production of Instructional Materials (3) Prerequisite: ET 504. Techniques of producing audio, photographic, slide/tape and classroom video instructional materials; producing camera ready copy for orthographic, thermographic, xerographic and photographic production.

ET 613 Instructional Telecommunications (3) Prerequisites: ET 502, ET 504. Conceptual issues and production techniques for developing instructional telecommunication systems and programs. Includes audioconferencing, teleconferencing, videodisks and studio TV production.

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.)

ET 625 Programming Languages for Educational Applications (3) Prerequisite: ET 425 or ET 503. A study of structured programming languages applied to educational settings. Course content includes software development systems incorporating a compiler and linker as well as related operating system technology.

ET 627 Computer Assisted/Managed Instruction (3) Prerequisite: ET 503. The generation and validation of computerized courseware and the management technology involved with effective delivery. Courseware involves management components for teachers and instructional components for students.

ET 650 Corporate Course Design (1-3) Prerequisite: Consent of Instructor/Advisor. Course development instruction offered at corporate locations. Content varies according to expert and/or corporation conducting course. Each has a subtitle, and no subtitle may be repeated for credit. Fee required. S/U final grade.

ET 684 Seminar in Educational Technology (3) Prerequisite: Consent of instructor. For graduate students wishing to develop advanced competency in Ed. Tech. Periodically, seminar may focus on topic reflecting instructor's interest area or on developing a student's inquiry.

ET 692 Internship: Subtitle (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.

ET 693 Practicum: Subtitle (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. May be repeated with different subtitles.

ET 695 Special Topics in Educational Technology (1-3) Prerequisite: Consent of Instructor. Scheduled on irregular basis. Explore special topics in Educational Technology. An appropriate subtitle will explain each course.

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 final grade.

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.

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.

Foreign Languages

FL 341 Methods of Teaching in the Secondary School (3) Prerequisite: Full admission to PTE or permission of instructor. 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) For language teachers or those planning to teach. Focus on specific, practical techniques for teaching French, German, or Spanish.

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.

FL 601 Practicum (1-10) Open only by invitation to resident graduate students. Supervised professional activity in student's area of interest.

Food, Nutrition and Dietetics

FND 210 Medical Terminology (.5) For students of any major. Terminology used in medical sciences. Development of medical vocabulary.

FND 250 Human Nutrition (3) For students of any major. Investigation of the principles of nutrition as applied to humans.

FND 251 Nutrition in the Life Cycle I (3) Prerequisite: FND 210, CHEM 131. Essential nutrient needs of individuals from conception through the school age years.

FND 252 Nutrition in the Life Cycle II (3) Prerequisite: FND 251. Essential nutrients for young, middle-aged and older adults. Socioeconomic, psychological, physiological factors influencing food intake. Dietetic majors only.

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.

FND 342 Food Science I (4) (2 lecture, 4 laboratory) Prerequisite: CHEM 131, FND 251. The chemical and physical structure of food and the effects of processing and preparation on food properties; principles of food preservation. Lab fee required.

FND 343 Food Science II (4) (2 lecture, 4 laboratory) Prerequisite: FND 342. Chemical and physical structure of food and the effects of processing and preparation on food properties; planning and serving nutritionally balanced, economical and aesthetically pleasing meals. Lab fee required.

FND 351 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 353 Clinical Nutrition (4) Prerequisite: FND 252, ZOO 350, CHEM 208. Nutrition intervention for acute and chronic stressors. Evaluation of laboratory values.

FND 355 Nutrition and Physical Fitness (3) For students of any major. Relationship of dietary practices to human performance and promotion of physical fitness.

FND 357 Nutrition in Health and Illness (4) Prerequisite: CHEM 108, ZOO 350 or concurrent. Nutrient needs of individuals and groups. Internal and external factors affecting nutrient requirements. Nursing majors only.

FND 358 Developmental Nutrition (3) The principles of nutrition and feeding in child development and developmental disabilities.

FND 393 Field Experience in Cultural Awareness (1-3) Study the interrelationships of food, culture and health in various populations in U.S.A. and selected countries.

FND 410 Professional Development Seminar (3) Development of the dietetic profession. Examination of topics in nutrition and dietetics not covered in previous course work. Methods of teaching nutrition in different educational settings.

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.)

FND 446 Food Service and Production (3) Prerequisites: FND 252, FND 343. Components of a quality food service and food production facility.

FND 447 Food Purchasing and Preparation (4) (2 lecture, 6 laboratory) Prerequisite: FND 446. Principles of large quantity meal planning, purchasing, preparation, and service through laboratory experiences in food service facilities. Lab fee required.

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 (1-3) Prerequisites: FND 353, FND 452. Application of the principles of clinical and community nutrition through laboratory and clinical experiences. Repeatable for a maximum of three credits.

FND 459 Foods: Facts and Fallacies (3) For students of any major. Investigate superstitions, beliefs, attitudes, taboos and understandings about food. Influence of mass-media on food choices. Cultural food habits.

FND 508 Workshop in Foods, Nutrition and Dietetics (1-3) Graduates only. Investigation of various topics in Food, Nutrition, or Dietetics. Each workshop has a subtitle, and no subtitle may be repeated for credit.

FND 556 Nutrition and Physical Fitness (3) Permission of instructor. In-depth study of interrelationship of dietary practice, physical fitness and/or athletic performance.

FND 558 Foods: Facts and Fallacies (3) Permission of instructor. Investigation of superstitions, beliefs, attitudes, taboos and understandings about food. Influences of mass-media on food choices.

FND 593 Field Experience in Cultural Awareness (3) Permission of instructor. Field experience in studying the interrelationship of food, culture and health in various populations in United States and selected countries.

FND 622 Directed Studies (1-3) Graduates only. Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

FND 656 Infant and Child Nutrition (3) Graduates only. Study of developmental changes and accompanying nutrient modifications from the prenatal stage through school-age.

FND 657 World Food Problems (3) Graduates only. Discussion of interrelationship of food supply to world conditions; problems of production and marketing; U.S. consumer practices and production. National and international food and nutrition policies.

FND 659 Seminar in Nutrition (3) Graduates only. Discussion of and interpretation of current literature and research in nutrition.

FND 696 Master's Project (6) Interdisciplinary Master's Students only. In lieu of a thesis for FND students in an interdisciplinary master's program, with the approval of a major advisor.

French

FR 100 Intensive Elementary French I (3) Prerequisite: Some previous knowledge of French. 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 101 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 102 Elementary French II (5) Prerequisites: FR 100 or 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 150 Practicum in Contemporary Culture (1) Prerequisite: Previous French. 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. May be repeated once for credit.

FR 201 Intermediate French I (4) 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 (4) 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 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 316 Contemporary France (3) Become familiar with the culture and society of France as they relate to business and other professional interests. Conducted in English.

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 (4) 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.

FR 402/502 Contemporary Life in France (3) 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.

FR 403/503 France of the Ancien Regime (4) 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, theater and music. Conducted in French.

FR 404/504 Modern France (4) 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, theater and music. Conducted in French.

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 422 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

FR 450/550 Studies in French Literature (3) Prerequisite: FR 302 or 312. Study complete works of major authors representing different movements and genres. Repeatable for credit if topic varies. Conducted in French.

FR 475/575 Seminar in French Literature (2) Prerequisite: FR 302 and 450. Analyze and discuss French Literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Repeatable for credit if topic varies. Conducted in English.

FR 401/501 Intensive French (4) Prerequisite: 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.

FR 402/502 Contemporary Life in France (3) Prerequisite: 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.

FR 403/503 France of the Ancien Regime (4) Prerequisite: 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, theater and music. Conducted in French.

FR 404/504 Modern France (4) Prerequisite: 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, theater and music. Conducted in French.

FR 505 Topics in French Civilization (1-3) Prerequisite: Graduate status or permission of the instructor. May be repeated with different titles to a maximum of 15 hours. 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. No one title may be repeated.

FR 506 Topics in French Literature (1-3) Prerequisite: Graduate status or permission of instructor. May be repeated with different titles to a maximum of 10 hours. 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. No one title may be repeated.

FR 508 Workshop (1-10) Prerequisite: Graduate status in French. For language teachers or those planning to be teachers. Workshop will focus on specific, practical techniques for teaching French or a specific content area.

FR 510 Advanced Placement Program-French (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.

FR 311/511 French Civilization and Literature Survey I (3) Prerequisite: 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) Prerequisite: 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 521 Problems in Advanced Grammar (1-3) Prerequisite: Graduate status or permission of instructor. May be repeated with different titles up to maximum of 5 hours. Learn the more difficult grammatical structures with special emphasis on structures presenting special difficulties in teaching French. Conducted in French. No one title may be repeated.

FR 522 Problems in Advanced Composition (1-3) Prerequisite: Graduate status or permission of instructor. May be repeated with different titles up to a maximum of 5 hours. Emphasize written expression, style and idiomatic usage of the French language. Conducted in French. No one title may be repeated.

FR 450/550 Studies in French Literature (3) Prerequisite: Graduate status in French. Study complete works of major authors representing different movements and genres. Repeatable for credit if topic varies. Conducted in French. Research paper required.

FR 475/575 Seminar in French Literature (2) Prerequisite FR 302 and 450. Graduate status in French. Analyze and discuss French literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Repeatable for credit if topic varies. Conducted in English.

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.)

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 Location and Human Behavior (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 300 Advanced Human Geography: Topics (3) 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. May be repeated under different topics.

GEOG 312 Economic Geography (3) 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) Explore the theoretical nature of human-environment systems from a geographical viewpoint and examine locational factors which influence behavior and resulting geographic patterns.

GEOG 318 Australia (2) 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 223 or equivalent course. Study the complexities of the physical world and investigate the interactions between human activities and the physical environment. May be taken more than once as topics vary.

GEOG 326 Africa (3) Trace relationships between the physical and cultural patterns, including land use, resource development, social and political problems.

GEOG 335 Geography of Middle America (3) 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 U.S. foreign relations.

GEOG 340 Europe (3) Study the relationships between the physical and cultural environments, including land use, resources, economics and political problems.

GEOG 344 Asia: Special Topics (3) Study the regions of Asia through variable offerings under this heading. Examine patterns of physical and cultural landscapes, social organization, and economic activities. May be repeated under different topics.

GEOG 350 Colorado (3) 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) 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 364 Maps and Imagery (3) Learn effective use of maps and globes, and develop skill in reading and interpreting maps and imagery.

GEOG 365 The Soviet Union (3) A regional analysis of geographic conditions, their historical importance, and their relation to economic, social and political problems in the Soviet Union and to its position in world affairs.

GEOG 370 Urban Geography (3) 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. May be repeated once for credit.

GEOG 402/502 Cartography (3) 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 422 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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 475 Quantitative Techniques in Geography (3) Prerequisite: STAT 201 or consent of instructor. Examine elementary statistical techniques useful to the analysis of geographical data. Some background in mathematics useful.

GEOG 490 Problems in Geography (1-3) A series of three advanced undergraduate research seminars, each conducted by an instructor specializing in regional or systematic study on which seminar is based, e.g., Latin America, Africa, Urban, Economic. May be repeated once for credit.

GEOG 492 Internship (1-3) Advanced undergraduate majors and minors use geographic training while working in local, state, or federal agencies. Participants must meet university internship requirements. May be taken for credit more than once.

GEOG 402/502 Cartography (3) 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 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 (3) Focus on applied aspect of geographic teaching or research. Subject determined by subtitle. Geography 508 (Workshop) credits will not count toward completion of the master's program requirement. May be taken for credit more than once.

GEOG 510 Seminar in Teaching Geography (3) Appraise and become familiar with various concepts, theories and skills in geography and with the techniques and methodologies appropriate for teaching them.

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 575 Seminar in Quantitative Geography (3) Prerequisites: GEOG 475 or equivalent. Undertake selected research projects which 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 579 Seminar in Systematic Geography: Topics (3) Intensive research in significant aspects of physical or human geography, including topic areas in soils, resource management, economic, quantitative, political, urban, or population geography. May be repeated under different topics.

GEOG 589 Seminar in Regional Geography: Topics (3) Closely focused research into significant aspects of regional geography, including topics in selected major world regions and sub-regions. May be repeated under different topics.

GEOG 590 Advanced Research Seminar (3) Prerequisites: GEOG 600 or 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. May be repeated for credit.

GEOG 600 Introduction to Graduate Study (3) Required of all first-year graduate students in geography. Take during first quarter of graduate work. An orientation to graduate study in general and the nature and methods of research in particular.

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.)

GEOG 693 Practicum (1-3) Open by invitation only to resident graduate students. Supervised professional activity in geography approximately two hours per day. Two copies of well-written paper must be filed with instructor before credit is given.

GEOG 699 Thesis (6) Required of those Master of Arts candidates in geography recommended by major advisor.

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. 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) (3 lecture, 3 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 201. Crystals, minerals and igneous, metamorphic and sedimentary rocks — their origins, descriptions and classifications. Fee required.

GEOL 340/540 Paleontology (3) (2 lecture, 3 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) Colorado rocks, minerals, fossils, landforms, oil, coal, oilshale, geologic history, and geologic hazards explored in informal atmosphere. Includes four-day field trip to investigate geological features in natural settings.

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.)

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 201. A survey of geologic phenomena which 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) 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 terranes using topographic maps, aerial photographs, plane table, and other methods.

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. This course 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 340/540 Paleontology (3) (2 lecture, 3 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 which 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) 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) 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 terranes 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.

GEOL 595 Special Topics in Geology (1-4) An opportunity to explore areas of geology beyond the scope of existing department offerings. May be repeated with different topic.

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.)

German

GER 100 Intensive Elementary German I (3) Prerequisite: Some previous knowledge of German. 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 101 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 102 Elementary German II (5) Prerequisite: GER 100 or 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 150 Practicum in Contemporary Culture (1) Prerequisite: Previous German. 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.

GER 201 Intermediate German I (4) Prerequisite: GER 102 or equivalent. 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 (4) 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 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 316 Contemporary Germany (3) Become familiar with the culture and society of Germany as they relate to business and other professional interests. Conducted in English.

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 (4) 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.

GER 402/502 Contemporary Life in Germany (3) 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.

GER 403/503 Practicum in Germany (4) Available only on Study Abroad. Experience work environment of the German business person, artisan, worker or professional through direct work experience. Conducted in German.

GER 404/504 Modern Germany (4) 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.

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 422 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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. Repeatable for credit if topic varies. Conducted in German.

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. Repeatable for credit if topic varies. Conducted in English.

GER 401/501 Intensive German (4) Prerequisite: 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.

GER 402/502 Contemporary Life in Germany (3) Prerequisite: 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.

GER 403/503 Practicum in Germany (4) Prerequisite: 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.

GER 404/504 Modern Germany (4) Prerequisite: 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.

GER 505 Topics in German Civilization (1-3) Prerequisite: Graduate status or permission of the instructor. May be repeated with different titles to maximum of 15 hours. 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. No one title may be repeated.

GER 506 Topics in German Literature (1-3) Prerequisite: Graduate status or permission of instructor. May be repeated with different titles to maximum of 10 hours. 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. No one title may be repeated.

GER 508 Workshop (1-10) Prerequisite: Graduate status in German. For language teachers or those planning to be teachers. Workshop will focus on specific, practical techniques for teaching German or a specific content area.

GER 311/511 German Civilization and Literature Survey I (3) Prerequisite: 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) Prerequisite: 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 521 Problems in Advanced Grammar (1-3) Prerequisite: Graduate status or permission of instructor. May be repeated with different titles to maximum of 5 hours. Learn the more difficult grammatical structures with emphasis on structures presenting special difficulties in teaching German. Conducted in German. No one topic may be repeated.

GER 522 Problems in Advanced Composition (1-3) Prerequisite: Graduate status or permission of instructor. May be repeated with different titles up to maximum of 5 hours. Emphasis on written expression, style and idiomatic usage of the German language. Conducted in German. No one title may be repeated.

GER 450/550 Studies in German Literature (3) Prerequisite: Graduate status in German. Variable topics include analysis and discussion of poetry, prose, drama and literary periods from Middle Ages to present. Repeatable for credit if topic varies. Conducted in German.

GER 475/575 Seminar in German Literature (2) Prerequisite: Graduate status in German. Analyze and discuss German literature pertaining to a specific topic. Prepare a research paper for class discussion and critique. Repeatable for credit if topic varies. Conducted in English.

GER 022 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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. Can be repeated for a maximum of 8 credits.

GERO 395 Special Topics (1-4) Can be repeated for a maximum of 6 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.)

GERO 460/560 Community Resources for the Elderly (3) 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 465/565 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 492 Undergraduate Internship in Gerontology (6-15) Prerequisite: Completion of 21 hours of required gerontology courses. May be repeated for a maximum of 15 credits. Only 12 credits may be counted towards degree program. S/U grade.

GERO 460/560 Community Resources for the Elderly (3) 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 465/565 Management Concepts for Aging Services (3) Examines basic concepts of management and administration of human service organizations. Emphasizes principles and practices currently used in public, private nonprofit, and proprietary aging programs.

GERO 595 Special Topics in Gerontology (1-3) Can be repeated for a maximum of 6 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.)

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. Fall.

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 policymaking, 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) Spring 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) May be repeated for a maximum of 15 hours. Only 12 credits may be counted towards degree program. S/U grade.

GERO 694 Practicum in Gerontology (1-4) Make application to the department before registration. May be repeated for a maximum of 8 credits.

GERO 699 Thesis (3-9) Minimum of 6 hours required. S/U grade.

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 theater, 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 precolombian 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) This course 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 ESL Methods and Assessment for Bilingual Education (3) Prepares bilingual teachers to teach English-as-a-Second-Language skills. Also includes theory and practice of language assessment. Taught in English.

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.)

HISP 508 Workshop (1-6) A study of topics relating to Hispanic Studies. Will be designed according to the interest of the student and the expertise of the instructor.

HISP 513 Professional Renewal (1-6) A study of topics relating to Hispanic Studies. Will be designed according to the interest of the student and the expertise of the instructor.

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.)

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 115 Asian Civilization (3) An introduction to principle transformations that occur in East Asian civilization, stressing the evolution of Chinese and Japanese social/political institutions, thought, and artistic expression, and their response to the West.

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 216 History of Spain and Portugal (3) A survey of Iberian history from the Recon-

quista to the post-Franco era emphasizing political and cultural developments.

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 222 History of the Early American West (3) The course focuses on the development of the frontier movement east of the Mississippi River from colonial times to the American settlement of Texas and the Far West after 1821.

HIST 224 History of Colorado (3) A survey of Colorado history from prehistoric times to the post World War II era.

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 Topics in American Military History (3) May be repeated twice with different subtitles. Surveys American wars from social, economic, strategic, political, and diplomatic perspectives.

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 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 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 U.S., emphasizing 19th and 20th centuries. Includes Irish, English, German, Italian, Scandinavian, Jewish, Asian and Latin American immigrants as well as nativism 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 History of Latin America to 1855 (3) A survey of Spanish America and Brazil from pre-Columbian civilizations to 1855. Covers conquest, church, Indian labor, administration, independence and beginning of nations.

HIST 315 History of Latin America: 1855 to the Present (3) A thematic study of personalism, nationalism, militarism, foreign influences, and socioeconomic classes with particular reference to Nicaragua, Cuba, Chile, Argentina, and Brazil.

HIST 318/518 Modern Africa (3) A study of the social, political, economic, and cultural transformation of twentieth-century Africa.

HIST 320 Colonial and Pre-Revolutionary 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) An 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 328 Trans-Mississippi West in American History, 1821 to 1890 (3) A study of the frontier movement west of the Mississippi to 1890, focusing on the major migrations westward and their influence on the development of modern America.

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 including 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 U.S. 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 U.S. Diplomatic History Since 1914 (3) A survey of American foreign policy from World War I to the present, emphasizing the problems of war and peace and the internationalist-isolationist conflict in the 20th century.

HIST 337 History of American Education (3) The development of American education from colonial times to the present, focusing on the European roots of the educational system to its impact on America's character. Graduate students will be required to submit a ten-page term paper with footnotes and bibliography.

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 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 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 364 Constitutional History of Medieval England (3) A survey of English legal, constitutional and political institutions during the Middle Ages. The pre-law student will be especially interested in the origins of the common law, juries and parliament.

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 in 19th century France and Europe. After fall of Napoleon 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.

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: Senior Seminar in History (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.)

HIST 480 Senior Project (3) Prerequisites: HIST 397 and HIST 399. An independent project in history under the guidance of a member of the staff chosen by the student. Required of all majors.

HIST 492 Internship (1-6) Independent, individualized projects jointly directed by faculty supervisors and staff of cooperating office or institution.

HIST 508 Workshop (3) Stresses practical aspects of either teaching or field work in specialized areas of History. Subject determined by subtitle. No subtitle may be repeated for credit.

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. May be taken twice under different subtitles.

HIST 513 Professional Renewal (1-8) Investigates various topics in history, depending on instructor. Each course subtitled, and none may be repeated for credit.

HIST 514 Seminar in Latin American History (3) Study of specific topics in Latin American history. May focus on colonial or post-independence period. May be either reading or research seminar.

HIST 515 Advanced Study in Latin-American History (3) A focus on themes in Latin-American history. These will include militarism, personalism; and nationalism, among others. One or more countries will be selected for the examination of these themes.

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 530 Topics in American History (3) Investigation of a topic in American history. Content depends on instructor.

HIST 333/533 U.S. 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-History (3) Intensive course in U.S. historiography and interpretation, designed for secondary school teachers teaching advanced placement courses in U.S. history. Includes writing of model syllabi and extensive historical analysis.

HIST 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. Graduate students will be required to submit a ten-page term paper with footnotes and bibliography.

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 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.

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.)

HIST 699 Thesis (1-9) Optional for Master of Arts programs on recommendation of the major advisor.

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 Science, Arts, Philosophy, History, Literature and Sociology.

HON 200 Honors Connections Seminar II (2) A variable content seminar for Honors students only which will engage them in a concentrated analysis of their values in the context of their times.

HON 351 Junior Honors Seminar (1-2) Prerequisite: Instructor's consent required. 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.

HON 451 Senior Honors Research Thesis (1-4) Prerequisite: Instructor's consent required. Different sections are offered by different departments. Required for senior participants in the Honors Program.

Human 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.

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 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 390 Rehabilitation Community Services (3) Examines various types of rehabilitative services and facilities. Course areas will include transition from school to work, supported work, sheltered workshops, rehabilitation facilities and independent living concepts.

HRS 394 Practicum in Human Services (3) Supervised experience in service agency. Supervisor evaluation and written report describing agency experience must be filed with instructor. May be repeated for 9 credits. S/U grade.

HRS 395 Special Topics in Rehabilitation (1-4) Course designed to investigate a specific aspect of rehabilitation. Can be repeated for a maximum of 9 credits.

HRS 397/597 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.)

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 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 Supervised Field Practice (6-15) Prerequisite: Application to Department one semester before registration. Supervised experience in service agency. Time participation in an approved setting. Minimum 600 clock hours.

HRS 508 Workshop in Human Services (1-4) Course designed to investigate a specific aspect of Human Services.

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 the Handicapped (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 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 595 Special Topics in Rehabilitation (1-4) Course designed to investigate a specific aspect of rehabilitation. Can be repeated for a maximum of 9 credits.

HRS 397/597 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 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) 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.)

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 Role of the Family 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 Rehabilitation Management (3) Learn duties, responsibilities and philosophies of rehabilitation office manager. Through simulated experience, develop competencies and skills in first line management, budgeting, accountability and quality assurance.

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 Supervised Clinical Practice in Rehabilitation Counseling (6-15) Prerequisite: HRS 630, HRS 631. Field experience for qualified human service major at department approved location. Written application to department at least one quarter before registration. S/U grade.

HRS 693 Practicum in Vocational Evaluation (3) Prerequisite: HRS 581. Meets minimum of 6 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. Fee required.

HRS 694 Practicum in Human Services Counseling (3) Prerequisite: HRS 630. Meets minimum of 6 hours per week. Qualified human services majors engage in counseling interviews and activities under the supervision of one or more university staff members. Fee required.

HRS 755 Supervised Practicum in College Teaching (3) Experiences in observation and supervised practice in teaching at college or university level. Course may be repeated for a maximum of 9 credits.

HRS 757 Advanced Practicum in Rehabilitation Administration (3) Course may be repeated for maximum of 9 credits. Students will receive supervised experience in administration, program planning, evaluation and grant writing. Approximately 150 clock hours per semester are required for 3 credits.

HRS 758 Advanced Practicum in Rehabilitation Research (3) Course may be repeated for maximum of 9 credits. Students will receive supervised experience in rehabilitation research, including research methods and design. Final research paper of publishable quality required.

HRS 759 Advanced Practicum in Rehabilitation Counseling Supervision (3) May be repeated for maximum of 9 credits. Students receive supervised experience in studying problems in training rehabilitation counselors. Approximately 150 clock hours per semester required for 3 credits.

HRS 760 Professional Development Seminar in Rehabilitation (1) Prerequisites: Admission to doctoral program or consent of instructor. Provide forum for development and discussion of research, professional issues, trends field human rehabilitation. May be repeated for a total of 4 hours.

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.

HRS 797 Doctoral Proposal Research (1-4) Required of doctoral students. Students may register for 1-4 hours in any semester, must earn 4 hours of credit towards doctoral degrees before candidacy. S/U grade.

HRS 799 Doctoral Dissertation (1-12) Required of doctoral candidates. 1-12 hours of dissertation credit in any semester. Students must earn 12 hours of dissertation credit for doctoral requirements. S/U grade.

Humanities

HUM 111 The Classical Period Through the Middle Ages (3) Study values, beliefs, customs of the periods through literature, visual arts, philosophy, mythology, and history.

HUM 112 The Renaissance to the Present (3) Study values, beliefs, customs, social and intellectual history 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. Course may be taken under various subtitles for a maximum of 9 credits; no subtitle may be taken more than once for credit.

HUM 210 Topics in the Humanities (3) Course may be repeated under different subtitles for a maximum of 9 credit hours. Interdisciplinary study of major themes or problems in civilization, incorporating social, philosophical, and/ or aesthetic perspectives.

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. Course may be taken under various subtitles for a maximum of 9 credit hours; no subtitle may be taken more than once for credit.

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) Course may be repeated for maximum of 9 credits. One or more great literary or artistic works in relation to history, philosophy and other arts.

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.)

Interdisciplinary Studies

ID 109 President's Scholars Symposium (1) This course is open to recipients of the President's Honor Scholarship. UNC professors discuss research interests and contemporary issues. S/U grade.

ID 176 The Idea of America (3) Analyze how art, architecture, music, literature, thought, and protest influenced and were influenced by the American Dream and trace the significance of past experiences to present concerns.

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 308 Workshop (1-3) Study problems in education, with area covered in any one workshop determined by title. May not repeat any subtitle for credit.

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 508 Workshop (1-3) Study problems in education, with area covered in any one workshop determined by title. May not repeat any subtitle for credit.

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.

Journalism and Mass Communication

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) Prerequisites: Functional typewriting skill (25 wpm) and consent of instructor or majors and minors. Sharpen skills and judgment in reporting and writing for broadcast and non-broadcast mass media. Fee required.

JMC 241 Radio Production (3) The basic hardware behind radio production, radio formats, diction and other microphone skills. Fee required.

JMC 310 Feature Writing News Media (3)
Prerequisite: JMC 210. 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. 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. 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. 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) The skills and techniques necessary in the preparation and production of broadcast advertising developed through practical training in the writing of various types of commercials. Fee required.

JMC 350 News Editing and Layout (3)
Prerequisite: JMC 210 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) The concepts, procedures and theories behind public relations work. Examine current practices in business, governmental and other settings.

JMC 385 Media Planning and Research (3)
Prerequisite: BAMK 365 A managerial approach to the study of advertising research and planning media strategies. Methods and procedures used in the planning and evaluation of the media mix will be examined.

JMC 387 Advertising Copywriting (3)
Prerequisites: BAMK 365, JMC 210. Advertising from the copywriter's standpoint, planning and writing creative strategies. Create copy for broadcast and print advertising, 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 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.

JMC 408 Special Topics (3) Current issues or problems in journalism and mass communications.

JMC 410 Advanced News (3) 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.)

JMC 443/543 Electronic Field Production (4)
Prerequisite: JMC 342. 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. The techniques and theories needed to produce regularly scheduled cable television programs. Fee required.

JMC 460 Media Management (3) 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 and BAMK 365. The tools and techniques used by the professional public relations practitioner.

JMC 484 Advertising and Society (3)
Prerequisite: BAMK 365. 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 491 International Mass Communications (3) How nations communicate with other nations and with their own people through various mass media; comparisons of the media structures of different countries; ethnocentrism in the media.

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.

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)
Prerequisite: Junior or senior status. Current and perennial ethical and legal issues in journalism and mass communications media that affect journalists, media management and the public.

JMC 508 Workshop (3) Special perennial or topical issues in journalism and mass communications.

JMC 443/543 Electronic Field Production (4) 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. 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 personological variable impacting decision-making in commercial and public telecommunications, and contemporary issues and problems in management.

JMC 380/580 Public Relations (3) Concepts, procedures and theories behind public relations work. Examine current practices in business, governmental and other settings.

JMC 481/581 Public Relations Techniques (3) Prerequisites: JMC 210, JMC 380, BAMK 365. 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)
Prerequisite: 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 and written paper are required.

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.)

JMC 699 Thesis (6) Required for Master of Arts candidates in the Journalism and Mass Communication emphasis.

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 (2) (1 hour of laboratory required) Study of the anatomical bases of human movement. Laboratory provides application of principles. Fee required.

KINE 221 Mechanical Kinesiology (2) (1 hour of laboratory required) Application of mechanical principles in the study of human movement. Laboratory provides application of concepts. Fee required.

KINE 222 Physiological Kinesiology (2) (1 hour of laboratory required) Investigate the basic concepts in the physiological components of human movement. Laboratory provides application of principles. Fee required.

KINE 223 Psychological Kinesiology (2) (1 hour of laboratory required) Study of the neuropsychological components of motor learning and control, with an emphasis on movement problems. Laboratory provides application of concepts.

KINE 324 Maturational Kinesiology (2)
Prerequisites: KINE 222, KINE 223. Study of the growth and developmental components of human movement.

KINE 331 Mechanical Analysis of Sports, Exercise and Physical Activity (2) An introduction to the theory and methodology involved in the mechanical analysis of sports, exercise, and other physical activities.

KINE 332 Physiological Analysis of Sports, Exercise and Physical Activity (2) Practical application of physiological principles to sports, exercise and physical activity.

KINE 333 Psychological Analysis of Sports, Exercise and Physical Activity (2) 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, 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, and consent of instructor. 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.

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 393 Practicum in Kinesiology (1-6)
Supervised experience in the practical application of knowledge and skills learned in kinesiology classes.

KINE 400 Fitness and Exercise Kinesiology Programs (2) Explore fitness and exercise programs with emphases on 1) potential careers, 2) American College of Sports Medicine certifications, and 3) the types of preparation important to a professional in this discipline.

KINE 402 Human Performance Assessment (2) Prerequisite: KINE 222 or equivalent. Uses and techniques of assessment in fitness, work capacity, and sport. Experience in the use and interpretation of laboratory and field tests.

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 and ergogenic aids. The current methods of assessment of body composition are included.

KINE 406/506 Exercise Leadership and Program Management (3) Prerequisites: KINE 222 or equivalent. In-depth examination of the competencies necessary to lead physical fitness activities and administer programs of preventive and rehabilitative exercise.

KINE 408 Workshop in Kinesiology (1-3)
Offers a variety of workshops on special topics. Each workshop will have a subtitle and no subtitle may be repeated for credit. S/U grade.

KINE 410/510 Principles of Exercise Electrocardiography and Prescription (3)
Prerequisite: KINE 222 or equivalent. Principles of electrocardiography and ECG interpretation with a focus on exercise. Information will be used to prescribe type, intensity, duration, and frequency of individualized exercise programs.

KINE 415 Senior Research Project (1-3)
Prerequisite: Consent of instructor. This course will provide an opportunity for senior students to participate in a research project.

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.)

KINE 436 Sociology of Physical Activity and Sport (2) Application of sociological concepts and theories to examine current practices, problems, and issues in physical activity and sports.

KINE 485 Mechanism and Evaluation of Sports Injury (3) For majors only. Prerequisites KINE 380 or equivalent, admission to the Athletic Training Clinical Program, and consent of instructor. 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) For majors only. Prerequisites: KINE 380 or equivalent and admission to the Athletic Training Clinical Program, and consent of instructor. 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) For majors only. Prerequisites: admission to the Athletic Training Clinical Program and consent of instructor. 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: GPA of 2.7 in all core requirements of the major with KINE prefixes; overall GPA of 2.3; completion of all core requirements in the major minus the internship; and consent of program coordinator. Supervised experience in 1) strength and endurance conditioning of athletes, and/or 2) fitness and exercise program management, and/or 3) gerontological fitness, and/or 4) cardiac rehabilitation. Available for 6 hours credit; 12 hours minimum/maximum required. S/U grade.

KINE 500 Preventive and Rehabilitative Exercise Programs (2) An expanded exploration of applied kinesiology programs with emphases on 1) potential careers, 2) American College of Sports Medicine certifications, and 3) the type of preparation important to a professional in this discipline.

KINE 502 Human Performance Assessment (2) Prerequisite: KINE 222 or equivalent. Uses and techniques of assessment in fitness, work capacity, and sport. Experience in the use and interpretation of laboratory and field tests.

KINE 404/504 Exercise, Nutrition, and Body Composition (3) Prerequisites: KINE 222 or KINE 626 or equivalent. An expanded study of the nutritional aspects of human performance with a focus on fitness and ergogenic aids. The current methods of assessment of body composition are included.

KINE 406/506 Exercise Leadership and Program Management (3) Prerequisite: KINE 222 or KINE 626 or equivalent. An expanded examination of the competencies necessary to lead physical fitness activities and administer programs of preventive and rehabilitative exercise.

KINE 508 Workshop in Kinesiology (1-3) Offers a variety of workshops on special topics. Each workshop will have a separate title and no title may be repeated for credit. S/U grade.

KINE 410/510 Principles of Exercise Electrocardiography and Prescription (3) Prerequisite: KINE 222 or KINE 626 or equivalent. An expanded study of the principles of electrocardiography and ECG interpretation with a focus on exercise. Information will be used to prescribe type, intensity, duration, and frequency in individualized exercise programs.

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.

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.)

KINE 623 Advanced Psychological Kinesiology (3) Prerequisite: KINE 223 or equivalent. Study on an advanced level of the neuropsychological components of motor learning and control, emphasizing analysis of movement problems.

KINE 624 Advanced Maturation Kinesiology (3) Prerequisite: KINE 324 or equivalent. Study the maturational components of human movement on an advanced level and stress the analysis of movement problems.

KINE 625 Laboratory Techniques in Kinesiological Research (1-3) Prerequisite: Consent of instructor. Each of the titles listed below is a separate course. Each course will have one of these titles, and no title may be repeated for credit. Experiences provided are: Mechanical — Computer Analysis Systems I and II, Electronic Analysis Systems, Videographic Analysis Systems; Cinematographic Analysis Systems; Physiological — Biochemical Analysis, Ergometric Analysis Systems; Psychological — Psychological Skills Techniques and Training; Perceptual and Motor Analysis Systems. 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) Prerequisite: Consent of instructor. Each of the titles listed below is a separate course. Each course will have one of these titles, and no title may be repeated for credit. 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.

KINE 635 Seminar in Sports Psychology (2) Application of psychological concepts, principles, and empirical findings to organized sport settings.

KINE 636 Seminar in Sports Mechanics (2) Application of mechanical principles in the analysis of motor skills.

KINE 637 Seminar in Sports Physiology (2) Prerequisite: KINE 626. Study of the physiological effects of acute and chronic participation in sports, including the physiology of training and factors that influence performance.

KINE 670 Sociology of Sport and Physical Education (3) Advanced study of the applications of sociological concepts and theories to the study of sport and physical education in American society.

KINE 672 History of Sport and Physical Education (3) Study of the historical forces which have influenced sport and physical education.

KINE 680 Concepts in Sports Kinesiology (1-3) Prerequisite: Consent of instructor. This course may be repeated. Each concept course will have a separate title and no title may be repeated for credit.

KINE 685 Concepts in Dance Kinesiology (1-3) Prerequisite: Consent of instructor. This course may be repeated. Each concept course will have a separate title and no title may be repeated for credit.

KINE 690 Problems in Human Movement (3) Prerequisite: Possession of knowledge related to advanced principles of anatomical, mechanical, physiological, psychological, and maturational kinesiology; see descriptions for KINE 620, 621, 623, 624, and 626. Individual and group study of problems related to scientific variables of human movement.

KINE 692 Graduate Internship in Kinesiology (6) Prerequisite: Consent of the instructor. Supervised experience structured to the special philosophy and functions of the student's graduate program.

KINE 694 Special Topics in Kinesiology (1-3) Course may be repeated for a total of three hours credit. Engage in a course of study designed to investigate a special topic.

KINE 699 Thesis (1-8) Optional for Master of Arts students on recommendation of major advisor. S/U grade.

KINE 755 Supervised Practicum in College Teaching (1-6) Course may be repeated but total may not exceed 6 hours. Experience supervised teaching of undergraduate kinesiology lessons. Develop course outlines and effective teaching techniques.

KINE 797 Doctoral Proposal Research (1-4) Required of all doctoral students. Students may register for 1-4 hours of this course in any semester, but must earn a minimum/maximum of four hours of credit for the doctoral dissertation proposal research in partial fulfillment of doctoral requirements before admission to candidacy. S/U grade.

KINE 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. Students may register for 1-12 hours of dissertation credit in any semester, but must earn a minimum/maximum of 12 hours of credit for dissertation as partial fulfillment of the doctoral requirements. S/U grade.

Mathematics

MATH 110 Mathematics and Liberal Arts (3) 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 113 Professional Renewal (1-8) Concentrate on various topics in mathematics, depending on instructor conducting course. Each course has a subtitle, and no subtitle may be repeated for credit.

MATH 123 Intermediate Algebra (3) Prerequisite: One year high school algebra and 1 year high school geometry. Elementary concepts of algebra including quadratic equations, the function concept and systems of linear equations.

MATH 124 College Algebra (3) Prerequisite: MATH 123 or full-year of modern, second year high school algebra with the grade of "C" or better. Treat quadratic, exponential and logarithmic functions. Topics from matrices and the theory of equations.

MATH 125 Plane Trigonometry (3) Prerequisite: MATH 124 with the grade of "C" or better. Study circular functions and their applications, inverse trigonometric functions and identities, and cover complex numbers through DeMoivre's Theorem.

MATH 127 Elementary Functions (4)

Prerequisite: MATH 123 or full year of modern, second year high school algebra with the grade of "C" or better. 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. First course in 3-course sequence in analytic geometry and calculus. Limits, derivatives, extremes, 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)

Prerequisite: MATH 123 with the grade of "C" or better or two years of high school algebra. Standard topics from finite mathematics: algebra, matrices, sets, and probability.

MATH 176 Topics in Calculus (3)

Prerequisite: MATH 175 with the grade of "C" or better. Techniques and applications of differential and integral calculus in social science and business.

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.

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, with 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 & 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; vectors functions of several variables and power series.

MATH 283 Informal Geometry (3)

Study informal Euclidean geometry suitable for the K-8 curriculum, employing laboratory techniques where applicable.

MATH 305 Mathematics of Finance (3)

Prerequisite: Ability to solve algebraic equations and use logarithms. Study simple and compound interest, bank discount, annuities, amortization, and insurance. Scientific or business calculator required.

MATH 321 Introduction to Abstract Algebra (4)

Prerequisite: MATH 221 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 pertinent 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 geometrics.

MATH 350 Elementary Probability Theory (4)

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 Statistics (3)

Prerequisites: MATH 233, 221 with the grade of "C" or better 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 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.)

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 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)

Prerequisite: MATH 233 with the grade of "C" or better. 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)

Prerequisite: 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. Course may be repeated for a maximum of 8 semester hours.

MATH 510 Seminar in Mathematics (1)

Prerequisite: consent of instructor. Course may be taken up to four times. Study discussion and student presentation of topics in mathematics. S/U Grading.

MATH 513 Professional Renewal (1-8)

Topics of interest in mathematics will depend on instructor and each course will have a subtitle. No subtitle may be repeated for credit.

MATH 523 Modern Algebra I (3)

Prerequisite: MATH 321 or equivalent. Concepts of abstract algebra emphasizing group theory, ring theory, field theory, polynomial rings, principal ideal rings, and other selected topics.

MATH 524 Modern Algebra II (3)

Prerequisite: MATH 523 or equivalent. Continuation of MATH 523.

MATH 525 Linear Algebra I (3)

Prerequisite: MATH 321. Vector spaces, linear transformations, matrices, eigenvalues, canonical forms, quadratic forms and other selected topics.

MATH 535 Introductory Analysis I (3)

Prerequisite: MATH 233. First in 2-course sequence. This includes elements of topology, sequences of numbers, functions, and continuous functions.

MATH 536 Introductory Analysis II (3)

Prerequisite: MATH 535. Riemann-Stieltjes integral, series of numbers and functions, differentiation and integration of functions of several variables.

MATH 540 Introduction to Topology (3)
Prerequisite: MATH 233. Elementary point-set topology. Emphasis given to metric spaces.

MATH 543 Modern Classical Geometry (3)
Prerequisite: Graduate standing in Mathematics. Course will emphasize studying topics in present-day Euclidean and non-Euclidean geometry. Special importance being placed on the foundations of the different geometries.

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 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) Prerequisite: consent of instructor. Explore a period of time, an area of mathematics, and/or a group of mathematicians. Consult instructor for emphasis.

MATH 565 Differential Equations I (3)
Prerequisite: MATH 432 or equivalent. Study basic methods, theory and applications of differential equations. Stress the intimate connection between differential equations and linear algebra.

MATH 566 Differential Equations II (3)
Prerequisite: MATH 565. Continuation of MATH 565. The qualitative approach to non-linear differential equations will be studied. Then topics in partial differential equations such as separation of variables and Fourier series.

MATH 585 Numerical Analysis I (3)
Prerequisite: MATH 432 and ability to program in BASIC, FORTRAN, or Pascal. Error analysis, solutions of non-linear equations and systems of non-linear equations, interpolation and approximation theory (including "least squares" approximations).

MATH 586 Numerical Analysis II (3)
Prerequisite: MATH 585. Error analysis, numerical integration, numerical solutions to differential equations, numerical solutions to systems of linear equations, numerical approximation of eigenvalues and Monte Carlo methods.

MATH 591 Theory of Numbers (3)
Prerequisite: MATH 321. Properties of integers, primes, congruences, Diophantine equations, and number-theoretic functions.

MATH 620 Theory of Fields (3) Prerequisite: MATH 524 or equivalent. Adjunction; separable and inseparable extensions; modular fields; Galois theory; transcendental extensions; and topics selected from ordered fields, fields with valuation and theory of elimination.

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.)

MATH 626 Theory of Rings (3) Prerequisite: MATH 524 or equivalent. Further development of ring theory including maximal, prime, and primary ideals, the Jacobson radical and the J-radical rings with chain condition, and other topics.

MATH 628 Theory of Groups (3) Prerequisite: MATH 524 or equivalent. An extension of the study of group theory begun in modern algebra, normal structure, Sylow theorems, Nilpotent groups, and soluble groups.

MATH 632 Complex Variable I (3)
Prerequisite: MATH 432 or 536. First in 2-course sequence. This covers complex numbers, analytic functions of one complex variable, Cauchy-Riemann equations, and differential calculus of analytic functions.

MATH 633 Complex Variable II (3)
Prerequisite: MATH 632. Elementary functions of a complex variable and their inverses, residues, poles, evaluation of real integrals, and advanced topics.

MATH 635 Real Analysis I (3) Prerequisite: MATH 432 or MATH 536. First in 2-course sequence. This covers elements of set theory and its application to classical integration theory.

MATH 636 Real Analysis II (3) Prerequisite: MATH 635. Topological and metric spaces, topological linear spaces and the theory of Banach spaces, general measure and integration theory.

MATH 646 General Topology I (3)
Prerequisite: MATH 432 or MATH 536. First in 2-course sequence. This includes set-point topology.

MATH 647 General Topology II (3)
Prerequisite: MATH 646. A continuation of MATH 646. This includes set-point topology.

MATH 695 Special Topics (1-3) Prerequisite: consent of instructor. Investigate advanced topics in analysis, algebra, topology, and statistics. Specific topics chosen at instructor's discretion and student's current needs. Course may be repeated for a maximum of 12 hours.

MATH 754 Intern Teaching in Mathematics (1-4) Course may be taken up to three times. Primarily for Doctor of Arts 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.

MATH 797 Doctoral Proposal Research (1-4)
Required of all doctoral students. A student may register for 1-4 hours of this class, but must earn a minimum-maximum of 4 hours of credit for doctoral dissertation proposal research in partial fulfillment of requirements before admission to candidacy.

MATH 799 Doctoral Dissertation (1-12)
Required of all doctoral candidates.

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. May be repeated once. S/U grade.

MED 341 Methods of Teaching Mathematics (3) Prerequisite: Full admission to PTE. 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. Must enroll in EDLS 363 simultaneously.

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.)

MED 509 Advanced Placement Program AB and BC Calculus (3) Topics in calculus and pedagogical information related to establishing and maintaining a calculus advanced placement program.

MED 513 Professional Renewal (1-8) Topics of interest in mathematics education will depend on instructor and each course will have a subtitle. No subtitle may be repeated for credit.

MED 577 Mathematics Teachers Workshop (1-3) Course may be repeated for a maximum of 12 credits. No more than 6 credits may be applied on any one graduate degree. Work on problems K-14. S/U grade.

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.)

MED 670 Diagnostic Teaching of Mathematics (3) Prerequisite: Undergraduate course in methods of teaching secondary mathematics. Learn diagnostic-prescriptive models with emphasis on teacher-constructed, diagnostic tests and on individually prescribed learning activities which are suitable for the level of the child's cognitive development. Active learning models will be emphasized. Course will enable one to teach mathematics in the spirit of PL 94-142.

MED 672 Curriculum in Secondary School Mathematics (3) Survey mathematics curriculum in grades 7-14, and research in mathematics education. Study reports and recommendation of several commissions, and learn about curriculum development, behavioral objectives and evaluation.

MED 673 Problems in Teaching Junior High Mathematics (3) Prerequisites: MATH 321, MED 672. Possible topics include: detailed considerations of behavioral objectives and evaluation, working with slow learners, content for grades 7-9, individualization and calculators and reading in the math classroom.

MED 674 Problems in Teaching Senior High Mathematics (3) Prerequisites: MATH 341, MED 672. Possible topics include: behavioral objectives and evaluation, future of geometry, teaching advanced algebra, mathematics curriculum for grade 12, advanced placement programs, approaches to teaching trigonometry, and working with the non-collegebound.

MED 675 Seminar in Literature for Mathematics Education (1) Course may be taken up to three times. Make a concentrated study of recent literature in the field of mathematics education, and identify, read, and critically discuss with other participants. S/U grade.

MED 678 Special Topics (2-3) Course may be taken up to four times. No more than six hours may be applied to any one graduate degree. Prerequisites and topics announced in Schedule of Classes. S/U grade.

MED 681 Seminar in Teaching College Mathematics (2) Readings in mathematics education, emphasizing higher education, practice in various teaching techniques, discussion of professional responsibilities, and other activities helpful to prospective college mathematics teachers. S/U grade.

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) 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 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.

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 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.)

MET 441/541 Synoptic Meteorology (3) Prerequisite: MET 407 or 507. Development and movement of air masses, fronts and associated weather systems. Synoptic weather charts and their uses.

MET 442/542 Synoptic Meteorology Lab (2) (4 laboratory) Concurrent with MET 441. Analysis and forecasting exercises and activities. Fee required.

MET 443 Synoptic Laboratory: Current Weather (2) (4 laboratory) Prerequisite: MET 306 or 500. Use of current weather charts and data in analysis and forecasting exercises. Field trips to NOAA and National Weather Service Forecast offices.

MET 460/560 Mesometeorology (3) Prerequisite: MET 306. Mesoscale weather phenomena, such as thunderstorms, tornadoes, tropical cyclones, lee wave and downslope winds.

MET 470/570 Satellite Meteorology (3) Prerequisites: MET 407 or 441 or MET 507 and 541. Use of atmospheric data and cloud imagery from satellites for understanding the atmosphere and forecasting the weather.

MET 500 Survey of Meteorology (4) (3 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 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 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 or 507. Development and movement of air masses, fronts and associated weather systems. Synoptic weather charts and their uses.

MET 442/542 Synoptic Meteorology Lab (2) (4 laboratory) Concurrent with MET 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 470/570 Satellite Meteorology (3) Prerequisites: MET 407 or 441 or MET 507 and 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.

MET 622 Directed Studies (1-4) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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, and 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 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) Contemporary Arts Connections is a course 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 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 (6) 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)

Prerequisite: Any UNC Science lab course or instructor's permission. 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 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, rappelling, customs, traditions, and organization and role of the U.S. 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 (8) (2

lecture, 6 lab) Prerequisite: 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. Lab required.

MS 321 Applied Leadership (3) Prerequisite: 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. Lab required.

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.)

MS 387 Practicum in Leadership and Military Operations (8) (2

lecture, 6 lab) 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) Prerequisite: consent of instructor. To be taken concurrently with HIST 250 during fall semester of MS IV year. Application of military staff functions while serving in leadership roles in the Army ROTC. Lab required.

MS 421 Role and Ethics of the Officer (3)

Prerequisite: 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. Lab required.

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.)

Musical Theatre

MT 285/485 Performance in Musical Theatre

(1-3) Prerequisite: 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 (2)

Prerequisite: Admission by audition and consent of instructor only. Production and presentation of musical theatre or tour format before live audiences. Unlimited repeatability.

MT 353 Musical Theatre Production (2)

Prerequisite: Admission by audition only. Production and presentation of musical theatre in a dinner theatre or tour format before live audiences. Unlimited repeatability.

MT 360 Scene Study in Musical Theatre (2)

Musical theatre literature explored through the study of period and style. The lab experience will include singing, dancing and acting. Lab section may be repeated.

MT 465 Musical Theatre Workshop (3) (2

Lecture, 1 Lab) Prerequisite: MT 360 and MUS 270/470 or permission of instructor. Taken concurrently with MUS 407. Study of role preparation and styles, particularly developing necessary skills to approach and prepare audition materials and new roles. May be repeated for a maximum 6 hours credit.

MT 475 Music Dance Workshop (1) May be repeated for maximum 4 hours credit. For cast of musical theatre or opera theatre production. Practical experience in dance and stage movement in preparation for public performance.

MT 285/485 Performance in Musical Theatre

(1-3) Prerequisite: 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-Immunochemistry (2)

Basics of immunology and serology techniques utilized in the clinical laboratory, covering blood banking principles and methods, and uses of blood transfusions and component therapy in medicine.

MTEC 431 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 autoimmune 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, and 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, and 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, 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 grade. 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 lab. Class is open to all students, but is intended primarily for music majors and minors.

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 lab.

MUS 140 Introduction to Music (3) A

nontechnical 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 romantic and 20th century styles including a brief survey of American music.

MUS 152 Writing and Scholarship in the Performing and Visual Arts (3) Prerequisite: ENG 122 or equivalent. 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 160 Beginning Class Piano I (1) For Music and non-Music majors without background in piano. Music majors must take MUS 101 concurrently or demonstrate an equivalent knowledge of the material covered in that class. Develop performance in sight reading, harmonization and piano technique.

MUS 161 Beginning Class Piano II (1) Prerequisite: MUS 160 or consent of instructor. For Music and non-Music majors continuing to develop reading skills, technique and style necessary for playing elementary piano music.

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 enharmonic 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 lab.

MUS 202 Advanced Sight-Singing and Theory II (3) Prerequisite: MUS 201. Studies of 20th century techniques, with student compositions performed and evaluated in class.

MUS 204 Music Fundamentals and Experiences (3) For 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. 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. Music majors only.

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 permission 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 which 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.

MUS 261 Intermediate Class Piano II (1)
Prerequisite: MUS 260 or consent of instructor. Develop further reading skills, techniques and styles necessary to play simple accompaniments and intermediate piano music.

MUS 266 Madrigal Singers (1) Prerequisite: Membership in the Concert Choir 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 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)
Prerequisite: Consent of instructor. Instruction concentrates on fundamental principles of voice production. Development of rhythmic and melodic accuracy receives primary consideration. Unlimited repeatability. Fee required.

MUS 270 Individual Performance in Voice (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 271 Individual Performance in Piano (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 272 Individual Performance in Organ (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 273 Individual Performance in Strings (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 274 Individual Performance in Woodwinds (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 275 Individual Performance in Brass (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 276 Individual Performance in Percussion (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 277 Individual Instruction in Composition (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 278 Individual Performance in Harp (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 279 Individual Performance in Guitar (2-4) Prerequisite: consent of instructor. Unlimited repeatability. Fee required.

MUS 280 Mixed Concert Choir (1)
Prerequisite: 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)
Prerequisite: 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) Prerequisite: 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 Chamber Winds (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 291 Wind Ensemble (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 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.

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 18th Century Counterpoint (2)
Prerequisite: MUS 202. A study of two and three voice counterpoint as found in the invention, canon, fugue and chorale prelude.

MUS 302 Form and Analysis (2) Prerequisite: MUS 202. The study of homophonic forms, beginning with the motif and continuing with the analysis of the sonata, rondo and variation forms.

MUS 303 Instrumentation (2) Prerequisite: MUS 202. A course planned to develop knowledge and skill in arranging and orchestrating for various combinations of instruments from a few instruments to a full symphony orchestra.

MUS 307 History of Instruments and Instrumental Practice (3) A historical study of the development of musical instruments and the performance practices associated with them.

MUS 308 Music Workshop (1-4) Receive information about current important ideas in many fields of knowledge from authorities nationally known in their fields of specialization. S/U grade. Unlimited repeatability with different course title/content.

MUS 310 Teaching General Music in Elementary Schools (2) Prerequisite: MUS 210 and admission to PTE. 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 and admission to PTE. 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)

Prerequisite: Music majors 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) 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. For non-Music majors.

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) 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. Clinical experience required.

MUS 318 Music in Early Childhood (2) Prerequisite: MUS 202 or 206. Explore a broad range of teaching ideas which nurture musicality in children ages 2-7.

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 and 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 323 or instructor's permission. 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 Acting for Singers (2) Instruction in the special needs of the singer/actor: staging of arias, improvisation, freeing the voice through movement. May be repeated once.

MUS 336 German Art Song I (2) In-depth study of the art song from its historical beginnings through the music of Schubert.

MUS 337 German Art Song II (2) In-depth study of German art song after Schubert to the present, with particular emphasis upon style, technical requirements and diction.

MUS 338 French/Italian Art Song (2) Course in the performance of 19th and 20th Century French and Italian Art Song with particular emphasis upon style, technical requirements and diction.

MUS 339 British/American Art Song (2) In-depth study of British and American art song. Emphasis will be on research and performance of 20th century materials.

MUS 340 Survey of History and Literature of Jazz (3) An in-depth study of the history and literature of jazz from its beginnings to the present. Listening skills and critical writing skills are stressed. Open to all students.

MUS 345 Bach and Handel (3) Increase the enjoyment of Baroque music through the understanding of and familiarity with the works of two outstanding composers. Their lives, works and compositional styles will be studied.

MUS 346 Jazz Arranging, Small Ensembles and Big Bands (2) Prerequisite: MUS 202 or consent of instructor. Learn the art of calligraphy, the basics for arranging for small jazz ensembles, and work with big band scoring.

MUS 347 Jazz Arranging, Vocal Jazz and Studio Orchestra (2) Prerequisite: MUS 346 or consent of instructor. Continuance of MUS 346 with focus on vocal jazz and studio orchestra composition. Performance of material at end of quarter by studio orchestra and vocal jazz ensemble.

MUS 348 Accompanying and Coaching I (2) Prerequisite: Consent of instructor. Acquaint students with necessary skills for ensemble performance, accompanying and coaching. Course content will change each semester. Unlimited repeatability.

MUS 349 Accompanying and Coaching II (2) Prerequisite: MUS 348 or consent of instructor. Acquaint students with necessary skills for ensemble performance, accompanying and coaching. Course content will change each semester. Unlimited repeatability.

MUS 352 Principles of Piano Teaching I (2) Compare current piano methods. Study technical and musical problems with a beginning student. Offered every other year.

MUS 353 Principles of Piano Teaching II (2) Prerequisite: MUS 352. 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 I (1) Designed to develop the necessary skills and knowledge needed to organize, administer, plan, and teach marching band shows. Clinical experience required.

MUS 357 Marching Band Techniques II (1) Designed to continue developing the necessary skills and knowledge needed to organize, administer, plan, and teach marching band shows.

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 UNC String Project Pedagogy and Supervised Teaching Practicum (1-2) Prerequisite: 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: THEA 360, MUS 260 and/or MUS 469 (6 hours) or by audition. Must be taken concurrently with 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. May be repeated for a maximum 6 hours credit.

MUS 410 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 Keyboard Literature I (2) Prerequisite: Piano performance at Level II or above. The study of keyboard music from its earliest beginnings through the works of Bach and Bach's sons. Offered every other year.

MUS 416 Keyboard Literature II (2) Prerequisite: Piano performance at Level II or above. Concentrate on keyboard works from Haydn and Mozart through the modern period. Offered every other year.

MUS 417 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.)

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) Prerequisite: 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) Prerequisite: Consent of Instructor. Emphasis is on professional level performance of standard orchestral literature. Unlimited repeatability.

MUS 427 Orchestral Excerpts: Strings (1) Prerequisite: 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) Prerequisite: 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) Prerequisite: 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.

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.

MUS 452 Orff Schulwerk and Kodaly Choral Method in American Schools (2) Prerequisite: MUS 206 or MUS 310. A comparative study of Orff and Kodaly approaches to teaching music including philosophy, instructional principles, activities, and current materials.

MUS 454 Pedagogical Approaches to Keyboard Literature I (2) Evaluate various approaches to keyboard literature through student participation in teaching and performing. Concentrate on early Baroque through Classic periods. Unlimited repeatability.

MUS 455 Pedagogical Approaches to Keyboard Literature II (2) Concentrate on Romantic through 20th century music in this study of various approaches to keyboard literature. 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 466 Madrigal Singers (1) Prerequisite: Membership in the Concert Choir 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) Prerequisite: 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) Prerequisite: Consent of instructor. Instruction concentrates on fundamental principles of voice production. Development of rhythmic and melodic accuracy receives primary consideration. Unlimited repeatability. Fee required.

MUS 470 Individual Performance in Voice (2-4) Prerequisite: Consent of instructor. Unlimited repeatability. Fee required.

MUS 471 Individual Performance in Piano (2-4) Prerequisite: Consent of Instructor. Unlimited repeatability. Fee required.

MUS 472 Individual Performance in Organ (2-4) Prerequisite: Consent of instructor. Unlimited repeatability. Fee required.

MUS 473 Individual Performance in Strings (2-4) Prerequisite: Consent of Instructor. Unlimited repeatability. Fee required.

MUS 474 Individual Performance in Woodwinds (2-4) Prerequisite: Consent of instructor. Unlimited repeatability. Fee required.

MUS 475 Individual Performance in Brass (2-4) Prerequisite: Consent of Instructor. Unlimited repeatability. Fee required.

MUS 476 Individual Performance in Percussion (2-4) Prerequisite: Consent of Instructor. Unlimited repeatability. Fee required.

MUS 477 Individual Instruction in Composition (2-4) Prerequisite: Consent of instructor. Unlimited repeatability. Fee required.

MUS 478 Individual Performance in Harp (2-4) Prerequisite: Consent of instructor. Unlimited repeatability. Fee required.

MUS 479 Individual Performance in Guitar (2-4) Prerequisite: Consent of instructor. Unlimited repeatability. Fee required.

MUS 480 Mixed Concert Choir (1) Prerequisite: 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) Prerequisite: 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) Prerequisite: Membership in Concert Choir or consent of instructor. 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 Chamber Winds (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 491 Wind Ensemble (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 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.

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 501 18th Century Counterpoint (2) Prerequisite: MUS 202. Study of two and three-voice counterpoint as found in the invention, canon, fugue and chorale prelude.

MUS 502 Harmony and Form I (3) Study 18th and early 19th century harmonic practice and tonality concepts.

MUS 503 Harmony and Form II (3) Prerequisite: MUS 502 or consent of instructor. The study of late 19th and 20th century harmonic and formal concepts.

MUS 505 Sixteenth Century Counterpoint (3) Study the style of 16th century polyphonic music, emphasizing actual music of the period as well as theoretical concepts. Compose two-, three-, and four-voice motets.

MUS 506 UNC String Project Pedagogy and Supervised Teaching Practicum (1-2) Consent of Director, UNC String Project. 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. May be repeated for credit.

MUS 507 History of Instruments and Instrumental Practices (3) A historical study of the background and development of musical instruments, with emphasis on the related performance practices.

MUS 508 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 grade. Unlimited repeatability with different course title/content.

MUS 509 Electronic Music (3) Describe materials used in electronic music and the techniques and equipment employed to transform and organize these into compositions. Students learn to use the synthesizer.

MUS 510 Vocal Pedagogy (2) An introduction to the science and teaching of singing. 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 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 515 Keyboard Literature I (2) Piano performance at Level II or above. Study keyboard music from its earliest beginnings through the works of Bach and Bach's sons. Offered every other year.

MUS 516 Keyboard Literature II (2) Piano performance at Level II or above. Study keyboard music from its earliest beginnings through the works of Bach and Bach's sons. Offered every other year.

MUS 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 (1) Prerequisite: Consent of instructor required. Develop teaching techniques for the saxophone in the areas of performance, style, repertoire, intonation, and historical perspective.

MUS 533 Curriculum Trends in Music Education (3) Study curriculum trends in music education, including methods of teaching, curriculum development, and aesthetic education.

MUS 534 Acting for Singers (2) Instruction in the special needs of the singer/actor: staging of arias, improvisation, freeing the voice through movement.

MUS 536 German Art Song I (2) In-depth study of the art song from its historical beginnings through Schubert.

MUS 537 German Art Song II (2) In-depth study of German art song after Schubert to the present.

MUS 538 French/Italian Art Song (2) Course in the performance of 19th and 20th century French and Italian Art Song with particular emphasis upon style, technical requirements and diction.

MUS 539 British/American Art Song (2) In-depth study of British and American art song. Emphasis will be on research and performance of 20th century materials.

MUS 542 Jazz Pedagogy (2) Takes a pedagogical approach to the analysis of jazz ensemble scores, rehearsal techniques and rhythm sections, and looks at concert planning and audience building. Open to graduate and qualified senior Music majors only.

MUS 543 Jazz Program Administration, Planning and Development (2) 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. Open only to graduate students and qualified senior Music majors.

MUS 546 Jazz Arranging, Small Ensembles and Big Bands (2) Prerequisite: MUS 202 or instructor's consent. Learn the art of calligraphy, the basics for arranging for small jazz ensembles, and work with big band scoring.

MUS 547 Jazz Arranging, Vocal Jazz and Studio Orchestra (2) Prerequisite: MUS 546 or consent of instructor. Continuance of MUS 546 with focus on vocal jazz and studio orchestra composition. Performance of material at end of quarter by studio orchestra and vocal jazz ensemble.

MUS 548 Accompanying and Coaching I (2) Prerequisite: Consent of instructor. Acquaint students with necessary skills for ensemble performance, accompanying and coaching. Course content will change each semester. Unlimited repeatability.

MUS 549 Accompanying and Coaching II (2) Prerequisite: MUS 548 or consent of instructor. Acquaint students with necessary skills for ensemble performance, accompanying and coaching. Course content will change each semester. Unlimited repeatability.

MUS 550 Score Reading and Analysis (1) May be repeated up to four times for credit. 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.

MUS 551 Individual Performance in Conducting (2) May be repeated four times for credit. 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.

MUS 552 Principles of Piano Teaching I (2) Compare current piano methods. Study technical and musical problems with a beginning student. Offered every other year.

MUS 553 Principles of Piano Teaching II (2) Prerequisite: MUS 552. A study of the methods of teaching musicianship and pianistic skills. Observe private and group lessons. Supervised teaching internship required. Offered every other year.

MUS 554 Pedagogical Approaches to Keyboard Literature I (2) Evaluate various approaches to keyboard literature through student participation in teaching and performing. Concentrate on early Baroque through Classic periods. Unlimited repeatability.

MUS 555 Pedagogical Approaches to Keyboard Literature II (2) Concentrate on Romantic through 20th century music in this study of various approaches to keyboard literature. 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 M.M. and M.M.E. candidates in music. Must be taken as early as possible.

MUS 603 Analytical Studies in Music (3) Prerequisite: Mastery of traditional harmony. Students analyze the structure of music.

MUS 606 Graduate Seminar in Elementary School Music (3) Prerequisite: 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) Prerequisite: Graduate standing and school music teaching experience. Discover materials, methodologies, philosophies and trends in teaching choral and general music at these levels.

MUS 610 Tests, Measurements and Research in Music Education (3) Prerequisite: MUS 600 or MUS 700 Examination of standardized music tests and reliability and validity testing measures; writing of music tests, investigation of experimental and descriptive research, and experience in research writing style. Introduction to the use of the computer program (SPSS-X).

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) Prerequisite: 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.)

MUS 623 Individual Studies in Effective Teaching (3) Designed according to candidate's primary emphasis, and satisfies the Seminar in Teaching (discipline) required of all D.A. candidates in Music.

MUS 624 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 graduate student. 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 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, and 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. Emphasis on compositions by Handel and J.S. Bach.
- 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 by Haydn, Mozart and Beethoven and their treatment of the sonata principle.
- 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: Single Reeds (2)** Prerequisites: MUS 361, MUS 362. Investigate techniques for single reed instruments, gain additional playing proficiency, study teaching materials for individual and group instruction, and become familiar with standard solo and small ensemble literature.
- MUS 663 Woodwind Pedagogy: Double Reeds and Flute (2)** Prerequisites: MUS 361, MUS 362. Investigate techniques for double reeds and flute instruments, gain additional playing proficiency, study teaching materials for individual and group instruction, and become familiar with standard solo and small ensemble literature.
- MUS 666 Madrigal Singers (1)** Prerequisite: Membership in the Concert Choir 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 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)** Prerequisite: Consent of instructor. Instruction concentrates on fundamental principles of voice production. Development of rhythmic and melodic accuracy receives primary consideration. Unlimited repeatability. Fee required.
- MUS 670 Individual Performance in Voice (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 671 Individual Performance in Piano (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 672 Individual Performance in Organ (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 673 Individual Performance in Strings (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 674 Individual Performance in Woodwinds (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 675 Individual Performance in Brass (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 676 Individual Performance in Percussion (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 677 Individual Instruction in Composition (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 678 Individual Performance in Harp (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 679 Individual Performance in Guitar (2-4)** Prerequisite: consent of instructor. Unlimited repeatability. Fee required.
- MUS 680 Mixed Concert Choir (1)** Prerequisite: 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. Prerequisite: 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 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 Chamber Winds (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 691 Wind Ensemble (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 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.

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.

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. May be repeated for credit.

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 (6-8) Required of Master of Music Education students, Master of Music students majoring in Theory and Composition and Music History and Literature. Consult respective department for specific requirements.

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.

MUS 797 Doctoral Proposal Research (1-4) Required of all doctoral students.

MUS 799 Doctoral Dissertation (1-12) Required of all doctoral candidates.

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) Prerequisite: 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 systems.

NURS 301 Physical Assessment Theory (3) (2 lecture, 2 laboratory) Prerequisite: 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 Lab (.5) Prerequisite: Clinical Level III. Take concurrently with NURS 301. Clinical practice in basic physical examination.

NURS 303 Basic Nursing Practice (4) (8 laboratory) Prerequisite: Clinical Level III status. A course involving simulated and living laboratory experiences which enable the student to achieve beginning skills in assisting patients in activities of daily living and skills in therapeutic nursing measures. Lab fee required.

NURS 304 Childbearing Families (3) Prerequisite: Clinical Level III status. Provides knowledge to develop and implement nurse agency in relationship to families in their reproductive years, emphasizing the development and maximization of self-care capabilities.

NURS 305 Conceptual Foundations for RNs (3) Prerequisite: R.N. admitted to the School of Nursing. A course designed specifically for RNs which examines the School of Nursing's philosophy of professional nursing. The nursing process will be explored in depth using Orem's Self Care Model.

NURS 306 Nursing Care of Children (3) Prerequisite: NURS 300, NURS 301, NURS 303. Provides knowledge to develop and implement nurse agency with both well and sick children as individuals within families. Emphasis on maximizing the self-care agency of children within families.

NURS 309 Adult Nursing Systems I (3) Prerequisite: 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 303, ENG 122. An introduction to scientific inquiry including the research critique and identification of researchable problems in clinical practice. The self-care model of nursing is viewed in relation to clinical research.

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 326 Pathophysiology (3) Prerequisite: ZOO 221, ZOO 250. 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 (3) Prerequisite: A current R.N. license is required. Designed course to provide registered nurses cognitive and technical skills in problem-oriented recording, history taking and physical examination. Emphasis placed on identification of normal from abnormal findings.

NURS 329 Adult Nursing Systems II (3) Prerequisite: 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) Prerequisite: Clinical Level III status. Provides clinical opportunities to observe, apply and participate in the development of self-care agency and nurse agency in regard to childbearing families. Lab fee required.

NURS 360 Practicum in Care of Children (4) (8 laboratory) Prerequisite: NURS 300, NURS 301, NURS 303, concurrent enrollment in NURS 306. Application of knowledge of nursing systems of children requiring medical-surgical interventions, laboratory and clinical experience will focus on self-care deficits and self-care agencies of children and families. Lab fee required.

NURS 390 Adult Nursing Practicum (6) (12 laboratory) Prerequisite: NURS 300, NURS 301, NURS 303. Application of knowledge of nursing systems of adults requiring medical-surgical interventions. Laboratory and clinical experience will focus on self-care deficits due to illness or injury. Lab fee required.

NURS 402 Community Nursing Theory (3) Prerequisite: Clinical Level IV status; concurrent enrollment in NURS 420. Application of nursing within the concept of cultures, families, communities and society including principles of health maintenance, health promotion, and disease prevention.

NURS 406 Rehabilitation Nursing (3) Prerequisite: Clinical level IV status or R.N. status. Concepts related to the nursing care of adults with self-care deficits due to chronic illness.

NURS 407 Mental Health Nursing (3) Prerequisite: Clinical Level IV status, NURS 470 taken concurrently. Psychosocial nursing theory emphasizing: interpersonal relationships, principles of communication, group processes, developmental theories, recognition of abnormal behavior and interventions which 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. Subtitle will indicate area covered by any one workshop, but no subtitle may be repeated for credit.

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. Course may be repeated; total hours may not exceed five hours.

NURS 415 Professional Perspectives (4)
Prerequisite: Clinical Level IV status. Examine current issues which challenge the professional practice of nursing including organizations, ethics, political power, economics, and historical perspectives.

NURS 420 Community Nursing Practicum (4) (8 laboratory) Prerequisite: Concurrent enrollment in NURS 402. Application of concepts of health maintenance, health promotion, and disease prevention through a clinical experience in a community agency. Lab 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.)

NURS 440 Complex Nursing Systems (3) (1 seminar to be arranged; 6 laboratory)
Prerequisite: Clinical Level IV status. Synthesizes knowledge and practice concepts, including leadership and management through clinical experiences. Lab fee required.

NURS 441 Issues and Concepts in Geriatric Nursing (3) Prerequisite: Clinical Level IV status or permission of instructor. Developmental approach to the theories of aging (physiological, psychological, psychosocial and environmental). Emphasizes nursing roles related to adult life-span 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) (1 seminar and 12 laboratory) Prerequisite: NURS 440 and Clinical Level IV status. A combination of seminar and supervised practicum experience which provides a socialization into the role set of the professional nurse.

NURS 470 Mental Health Practicum (4) (8 laboratory) Prerequisite: Concurrent enrollment in 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. Lab fee required.

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. Course may be taken up to two times with different topics.

NURS 500 Theory/Curriculum Development (3) Prerequisite: Admission to Master's Program. Introduction to theory development. Application of theory to education and practice of nursing. Emphasis on the use of nursing models as framework for nursing education.

NURS 502 Concepts in Chronic Illness (4)
Prerequisite: Admission to Master's Program. Impact of chronic illness on all age groups is examined using a developmental approach. Health maintenance and wellness promotion are explored.

NURS 503 Care of Chronically Ill Child (4)
Prerequisite: NURS 502. Emphasis is on nursing assessment, planning, implementation and evaluation of health promotion strategies for the chronically ill child.

NURS 504 Care of Chronically Ill Adult (4)
Prerequisite: NURS 502. Emphasis is on nursing assessment, planning, implementation and evaluation of health promotion strategies for the chronically ill adult.

NURS 505 Nursing Research (3)
Prerequisites: EPRE 602, NURS 500. Critique of selected nursing research projects to determine cost effective outcome, relevance to nursing practice, contribution to theory development. Develop research proposal that demonstrates knowledge of research design and analysis.

NURS 507 Leadership and Change Issues (3)
Prerequisites: NURS 500, NURS 502, NURS 505. Role of nurse as leader and change agent explored in relation to health promotion strategies with chronically ill adults.

NURS 508 Nursing Workshop (1-3) Offers graduate students an opportunity to increase nursing knowledge and skills. Subtitle will indicate area covered by any one workshop, but no subtitle may be repeated for credit.

NURS 591 Teaching Practicum (6)
Prerequisites: NURS 507. Supervised practice teaching of undergraduate nursing students and/or practicing nurses in the community agency and/or clients. Teaching experiences selected on the basis of students career goals.

NURS 699 Thesis (6) Prerequisites: NURS 520, NURS 530; NURS 507 or concurrent. Guided research project that demonstrates evidence of original thought as well as advanced knowledge of the research process.

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) Geological, physical, chemical and biological aspects of oceans and ocean basins. For non-science majors only. 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.)

OCN 500 Survey of Oceanography (4)
Principles of oceanography from a nonmathematical 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.

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.)

Physical Education and Dance

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 Advanced Lifesaving and Water Safety Instruction (3) Prerequisite: Advanced swimming skills, adequate physical fitness. Study advanced lifesaving techniques and swimming instruction methods, emphasizing stroke mechanics and skills analysis. Earn American Red Cross Certification in advanced Lifesaving and Water Safety instruction on successful completion. 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 (nonsurf) open water beach.

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.

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) Prerequisite: consent of instructor. 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.

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 166 Ballet (1) Gain knowledge and skill in the activity of ballet.

PE 167 Ballroom Dance (1) Gain knowledge and skill in the activity of ballroom dancing.

PE 168 Ethnic Dance (1) Gain knowledge and skill in the activity of ethnic dance.

PE 169 Gymnastics (1) Gain knowledge and skill in the activity of gymnastics.

PE 170 Jazz Dance (1) Gain knowledge and skill in the activity of jazz dance.

PE 171 Modern Dance (1) Gain knowledge and skill in the activity of modern dance.

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 173 Self-Awareness with Movement (1) Gain knowledge and skill in the activity of self-awareness with movement.

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 175 Tap Dance (1) Gain knowledge and skill in the activity of tap dance.

PE 185 Varsity Baseball (1) Prerequisite: consent of instructor. Participate in the sport of varsity baseball.

PE 186 Varsity Basketball (1) Prerequisite: consent of instructor. Participate in the sport of varsity basketball.

PE 187 Varsity Football (1) Prerequisite: consent of instructor. Participate in the sport of varsity football.

PE 189 Varsity Gymnastics (1) Prerequisite: consent of instructor. Participate in the sport of varsity gymnastics.

PE 190 Varsity Swimming (1) Prerequisite: consent of instructor. Participate in the sport of varsity swimming.

PE 191 Varsity Tennis (1) Prerequisite: consent of instructor. Participate in the sport of varsity tennis.

PE 192 Varsity Track and Field (1) Prerequisite: consent of instructor. Participate in the sport of varsity track.

PE 193 Varsity Volleyball (1) Prerequisite: consent of instructor. Participate in the sport of varsity volleyball.

PE 194 Varsity Wrestling (1) Prerequisite: consent of instructor. Participate in the sport of varsity wrestling.

PE 195 Varsity Women's Soccer (1) Participate in Varsity Women's Soccer.

PE 202 Introduction to Physical Education (1) For freshmen majors and transfer students. Receive orientation in the breadth, scope and nature of the professional program in physical education.

PE 203 Introduction to Coaching (1) An introduction to the knowledges, requirements, and responsibilities of coaching, including sport philosophy, sport sciences, sport medicine, and sport management. Fulfills requirements for ACEP Leader Level I.

PE 204 Movement Fundamentals I (2) Theory and practice of stability and locomotor movements; the exploration of movement mechanics, the analysis of mature movement patterns, and development of support movement patterns.

PE 205 Movement Fundamentals II (2) Prerequisite: PE 204. Designed to prepare students in the performance analysis of manipulative skills and activities.

PE 206 Analysis and Movements of Weight Training, Fitness, and Conditioning (2) Prerequisite: KINE 220. Study the principles, methods, and techniques of weight training, cardio-respiratory fitness, and general conditioning activities.

PE 207 Analysis and Movements of Individual Sports (2) Develop knowledge, skills and analysis techniques in the sport of golf, archery, bowling, and badminton. Fee required.

PE 208 Analysis and Movements 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 Movements of Folk and Square Dance (2) Develop knowledge, skills, and analysis techniques in American folk and square dances.

PE 215 Analysis and Movements of Basketball (1) Develop knowledge, skills, and analysis techniques in the sport of basketball.

PE 216 Analysis and Movements of Football (2) Develop knowledge, skills, and analysis techniques in the sport of football.

PE 217 Analysis and Movements of Soccer (2) Develop knowledge, skills, and analysis techniques in the sport of soccer.

PE 218 Analysis and Movements of Softball (2) Develop knowledge, skills, and analysis techniques in the sport of softball.

PE 219 Analysis and Movements 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 Movements of Baseball (2) Develop knowledge, skills, and analysis techniques in the sport of baseball.

PE 226 Analysis and Movements of Tennis (2) Develop knowledge, skills, and analysis techniques in the sports of tennis and badminton and an overview of racquetball techniques. Fee required.

PE 227 Analysis and Movements of Track and Field (2) Develop knowledge, skills, and analysis techniques in the sport of track and field.

PE 228 Analysis and Movements of Wrestling (2) Develop knowledge, skills, and analysis techniques in the sport of wrestling.

PE 229 Approaches and Methods in Teaching Adventure (2) Present the content, method, safety, and management of ropes courses. Students will also learn to use and implement ropes course activities with different age groups and populations.

PE 230 Analysis and Movement of Self Defense (2) Develop knowledge, skills and analysis abilities in the study of self defense techniques for men and women.

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 288 Physical Education Activities for the Elementary School (1) Elementary majors/minors only. 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 295 Beginning Dance Theory and Technique (2) Discussion of the body's structure and movement potential; study of and practice in the basic principles, movements and movement patterns of dance.

PE 296 Beginning Choreography and Improvisation (2) Prerequisite: PE 295 or instructor permission. Investigate and explore principles of modern dance composition such as movement manipulation, phrasing, spatial design and choreographic form. Experiences in spontaneous movement exploration.

PE 297 Intermediate Technique, Improvisation and Composition (2) Prerequisites: PE 295, 296. Learn intermediate level dance technique; movement analysis and composition as an intermediate dance student.

PE 308 Workshop in Physical Education (1-2) Study in the problem areas of participants. Problems will vary with experts conducting workshops. Each workshop has a sub-title and no sub-title may be repeated for credit. S/U grade.

PE 312 Coaching and Officiating of Baseball (3) Prerequisite: PE 220. 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 (3) Prerequisite: PE 215. 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 (3) Prerequisite: PE 216. 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 (3) Prerequisite: PE 208 or experience. 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 (3) Prerequisite: PE 226. 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 (3) Prerequisite: PE 227. 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 (3) Prerequisite: PE 217. 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 (3) Prerequisite: PE 218. 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 (3) Prerequisite: PE 116 or 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 (3) Prerequisite: PE 219. 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 (3) Prerequisite: PE 228. 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 which are necessary for students interested in the coaching profession.

PE 344 Clinical Experience in Teaching Physical Education (3) Prerequisite: PTE. Take concurrently with PE 345, 346, and 347. 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) Prerequisite: Take concurrently with PE 344, 346, 347 and PTE. 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 (1) Prerequisite: Take concurrently with PE 344, 345, 347 and PTE. 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) Prerequisite: Take concurrently with PE 344, 345, 346 and PTE. 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 354 Dance Performance (2) Study and practice basic theories of performing and/or choreography.

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. Lab required.

PE 392 Internship in Physical Education (1) Prerequisites: Must have completed majority of course in minor, Junior/Senior status, and permission of minor advisor. 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 grade.

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.)

PE 432 Adapted Physical Education (3) Prerequisites: PTE; KINE 220. Study various handicapping conditions, assessment methodology and federal regulations as they apply to teaching handicapped persons in public school physical education. Practical experience laboratory.

PE 436 Sociology of Physical Activity and Sport (2) Prerequisite: PTE. 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 Mentally Impaired (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 Handicapped (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 453 Teaching Methods, Rhythmic Analysis and Accompaniment (3) Prerequisites: PE 295, 296, 170, 171 or permission of instructor. Practice and study of rhythm, dance accompaniment and teaching methods used in dance classrooms.

PE 454 Dance History and Philosophy (2) Consider the history and development of dance as it is culturally determined, and the philosophy influencing dance.

PE 456 Advanced Technique, Improvisation and Composition (2) Prerequisites: PE 295, 296, 297 or instructor permission. Investigate advanced dance technique, theory, composition and problems connected with staging a dance performance.

PE 459 Dance Production in High School and College (2) Prerequisites: PE 295, 296, 456 or instructor permission. Make practical application of principles which serve the presentation of dance. Deal with the choreographic problem, its direction and production involving theater application of set, costume and light design.

PE 461 Program Administration (3) Prerequisite: PTE. Study administrative problems in athletics, physical education, fitness, and recreation programs, including budget, finance, legal aspects, purchase and care of equipment and supplies, public relations, events, schedules and facilities.

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 (1) Must be taken concurrently with student teaching. Discuss problems and possible solutions in such areas as: evaluation, management, engaged time, and discipline.

PE 492 Internship in Dance Leadership (3) Prerequisite: Completion of Dance Emphasis or instructor permission. Practice in leading dance classes. Experience chosen according to student's interest area. S/U grade.

PE 508 Workshop in Physical Education (1-2) Study in the problems areas of participants. Problems will vary with experts conducting workshops. Each workshop has a sub-title and no sub-title may be repeated for credit. S/U grade.

PE 438/538 Physical Education for the Mentally Impaired (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 Handicapped (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 in Human Performance and Leisure Studies (3) Develop an understanding of theories and principles involved in managing a program in human performance and leisure studies.

PE 553 Teaching Methods, Rhythmic Analysis and Accompaniment (3) Prerequisite: PE 295, PE 296, PE 170, PE 171 or consent of instructor. Practice and study of rhythm, dance accompaniment and teaching methods used in dance classrooms.

PE 554 Dance History and Philosophy (2) Consider the history and development of dance as it is culturally determined, and the philosophy influencing dance.

PE 556 Advanced Technique, Improvisation and Composition (2) Prerequisites: PE 295, PE 296, PE 297 or instructor permission. Investigate advanced dance technique, theory, composition and problems connected with staging a dance performance.

PE 559 Dance Production in High School and College (2) Prerequisites: PE 295, PE 296, PE 456 or instructor permission. Make practical application of principles which serve the presentation of dance. Deal with the choreographic problem, its direction and production involving theater application of set, costume and light design.

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 592 Internship in Dance Leadership (3) Prerequisite: Completion of dance emphasis or instructor permission. Practice in leading dance classes. Experience chosen according to student's interest area. S/U grade.

PE 602 Introduction to Research in Physical Education, Recreation, and Kinesiology (3) Required of all HPLS majors at Master of Arts level. 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 622 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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 Advanced Elementary 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 660 Administrative Interrelationships in Physical Education and Recreation (3) Develop understanding of and skill in the administrative process as applied to leadership and personnel interrelationships involved in operation of programs in health, physical education, fitness, athletics and recreation through study of basic concepts, theories, and organizational patterns of administration.

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 688 Legal Aspects of Human Performance and Leisure Studies (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) Prerequisite: 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 grade.

PE 695 Seminar in Physical Education (2) Prerequisite: consent of instructor. Students will make an in-depth study of contemporary topics under guidance of qualified graduate faculty and consultants. May be repeated for credit one time.

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 may register for 1-4 hours of dissertation proposal credit in any semester but must earn a minimum-maximum of 4 hours credit in partial fulfillment of degree requirements. S/U grade.

PE 799 Doctoral Dissertation (1-12) Doctoral students may register for 1-12 hours of dissertation credit in any semester, but must earn a minimum-maximum of 12 hours of credit for the dissertation. S/U grade.

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. S/U grade. No particular offering under this heading may be taken more than once.

PHIL 120 The Art of Philosophical Writing (3) Prerequisite: ENG 122 and at least one previous class in philosophy. Introduction to methods of philosophical writing and research.

PHIL 210 Scientific Reasoning (3) A study of the reasoning involved in testing theoretical, statistical, and causal hypothesis in the sciences and in evaluating practical decisions based, at least in part, on scientific findings.

PHIL 220 The Nature of Legal Reasoning (3) A study of the reasoning involved in the law. Students will read cases, write legal briefs, and argue their cases orally. No background in philosophy is required.

PHIL 240 Formal Logic (3) An intensive introduction to the basic principles and methods of formal logic.

PHIL 260 Topics in the History of Philosophy (3) A study of the major figures in the history of Western Philosophy from the pre-Socratics through the Medieval Period. May be repeated more than once.

PHIL 261 Modern and Recent Philosophy (3) A study of the major figures in the history of Western philosophy from the Renaissance through the 19th century.

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). May be repeated more than once.

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.)

PHIL 495 Advanced Seminar (3) Detailed investigation of a specific philosophical issue. Substantial independent research and at least one oral presentation required. May be repeated more than once. Limited enrollment.

PHIL 497 Student Internship (1-3) Prerequisite: Consent of Instructor. Practical training in one or more areas of the profession. May be elected more than once, only 6 credits counted for major and 3 for minor. S/U grade.

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. Variable topic course may be repeated more than once for up to 12 hours.

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.)

Physics

PHYS 220 Introductory Physics I (5) (4 lecture, 3 laboratory) Prerequisite: MATH 123. 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 (3) Prerequisite: Ability to program in a language such as BASIC, FORTRAN, or Pascal. Introduction to computer graphics techniques in science and engineering. Applications to design and to data analysis or presentation.

PHYS 240 General Physics I (5) (4 lecture, 3 laboratory) Prerequisite: MATH 131, concurrent. 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 concurrent. Second semester of calculus-based introductory physics. Electricity, magnetism, electromagnetic radiation, wave motion, sound, light, geometric and physical optics. Fee required.

PHYS 242 Elementary Modern Physics (3) (2 lecture, 3 laboratory) Prerequisite: PHYS 221 or concurrent PHYS 241. Modern Physics since 1895 including relativity, atomic, nuclear, and quantum concepts. Fee required.

PHYS 320 Mathematical Applications (3) Prerequisites: PHYS 241 concurrent and MATH 132. Survey of mathematical applications in advanced physical sciences, including vector calculus, integration techniques, complex variables, Laplace and Fourier transforms, and matrix algebra.

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 Alternating Current and Electronics (5) (4 lecture, 3 laboratory) Prerequisite: PHYS 221 and MATH 132 or PHYS 241. Alternating current circuits, transistor operation, integral circuits, operational amplifiers, feedback oscillators, power supplies. Fee required.

PHYS 345 Atomic, Nuclear and Condensed Matter I (5) (4 lecture, 3 laboratory) Prerequisite: PHYS 241. Relativity, quantization, x-rays, Bohr atom, wave properties of matter, Heisenberg's uncertainty principle, Schrodinger equation probability, radiation, nuclear power, historical material on fission and fusion, modern physics. Fee required.

PHYS 347 Optics (4) (3 lecture, 3 laboratory) Prerequisites: PHYS 241 and 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 and MATH 233 (prerequisite or concurrent). Introduction to kinetic theory and statistical mechanics, covering thermodynamic system, equations of state and first and second 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.)

PHYS 440 Mechanics II (2) Prerequisites: PHYS 340 and 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 and MATH 233. Second in a two course sequence. Theory of dielectrics, magnetic properties of matter, electromagnetic theory.

PHYS 443 Digital Electronics and Interfacing (4) (3 lecture, 3 laboratory) Prerequisites: PHYS 343 and MATH 233. Continuation of PHYS 343. D/A and A/D convertors, microprocessors, microcomputers, and serial and parallel interfacing of computers with experimental apparatus. Fee required.

PHYS 445 Atomic, Nuclear and Condensed Matter II (5) Prerequisite: PHYS 345 and MATH 233. Nuclear reactions, decay schemes, nuclear models, detection and evaluation of radiation, fundamental particle, molecular binding, stimulated emission, electron statistics, properties of solids, junction theory, superconductivity. Fee required.

PHYS 447 Applied Optics (3) Prerequisite: PHYS 241. Study of optical theory and technology in applications such as instrumentation, lasers, optoelectronics, optical fibers, information processing and communications.

PHYS 449 Quantum Mechanics (3) Prerequisites: PHYS 340 and PHYS 345. Intermediate quantum mechanics using the Schrodinger representation.

PHYS 470 Senior Research (1-3) Course may be repeated for a maximum of 12 hours. Prerequisite: 2 years of physics courses which 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.

PHYS 475 Seminar in Teaching Physics (2) For prospective physics and physical sciences 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.

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.)

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) Offers a variety of workshops on special topics. Each has a subtitle and no subtitle may be repeated for credit. S/U grade.

PPSY 513 Professional Renewal (1-3) Update skills and knowledge as a professional in the discipline. Variable in content, specific subject matter will be indicated in course subtitle when offered. No subtitle may be repeated for credit.

PPSY 558 Abnormal Psychology (3) Study of abnormal behavior, causes, symptoms, characteristics, classifications, prevention, and treatment.

PPSY 559 Introduction to Clinical Hypnosis (2) Prerequisites: PPSY 558, PSY 355 and consent of instructor. 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) Understanding of basic causes of prejudice and learning of prejudicial behavior. Experiences for increasing understanding of others and diminishing prejudice.

PPSY 568 Psychology of Women (2) Theory and psychological issues influencing gender identity such as definitions of abnormality, achievement, and interactional influences upon development. Graduates only.

PPSY 569 Violence Against Women and Children (2) Explores causes of interpersonal violence, societal conditions supporting such violence, and intervention methodologies and treatment strategies for female and child victims of abuse and abusers.

PPSY 580 Computer Applications to Professional Psychology (2) Overview of effective applications of computers in professional psychological environments. Learn how to select, use, and modify relevant software, legal and ethical limitations, and their implications.

PPSY 601 Practicum (1-3) Prerequisite: consent of instructor. PPSY 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 grade.

PPSY 602 Foundations of School Guidance (3) Study principles of school guidance, its application, and functions of counselors, administrators, teachers and parents in meeting student needs. Focus on elementary, secondary, and post-secondary school guidance.

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: School (1) Prerequisite: permission of practicum coordinator and must be taken concurrently with PPSY 606. Provides an opportunity to participate in a group experience facilitated by an advanced doctoral student or faculty member. S/U grade.

PPSY 606 Theories and Practices in Group Guidance (2) Taken concurrently with PPSY 605. Study information and methods used by guidance personnel working with groups of students in educational planning, career decisions and interpersonal relations.

PPSY 607 Theories of Counseling (2) PPSY majors only. The study and critical analysis of theoretical approaches used in 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 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, and applications to counseling and education are addressed.

PPSY 611 Externship in Guidance Services (5) Prerequisite: permission of instructor. 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. Minimum of 300 on site hours required. PPSY majors only. S/U grade.

PPSY 612 Practicum in Individual Counseling (4) Prerequisite: PPSY 607 and permission of practicum coordinator. PPSY majors only. Receive supervised experience in counseling and interview analysis, including use of audio and video tapes, client and supervisor feedback, and weekly seminar. Requires 15 hours per week minimum. S/U grade.

PPSY 613 Externship in Counseling with Children (5) Prerequisite: permission of instructor. 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. Minimum of 300 on site hours required. PPSY majors only. S/U grade.

PPSY 614 Externship in Counseling with Youth and/or Adults (5) Prerequisite: permission of instructor. PPSY majors only. 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. Minimum of 300 on site hours required. S/U grade.

PPSY 615 Counseling Practicum: School (3) Prerequisite: PPSY 607 and permission of practicum coordinator. PPSY majors only. Work with age appropriate clients in individual counseling. The supervision process includes interview analysis (audio and video tapes), client and supervisor feedback, and weekly seminars. Requires 15 hours per week. S/U grade.

PPSY 616 Career Guidance, Counseling and Placement (2) 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 618 Practicum in Behavior Modification (3) Prerequisite: EPRE 540 or PPSY 638 and consent of instructor. Survey and supervised application of major approaches to behavior modification.

PPSY 620 Foundations of Existential Psychology (2) Investigate fundamental assumptions of existential thought as they translate into psychological theory and implications regarding human nature, motivation, values, and purpose relevant to the American culture.

PPSY 622 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

PPSY 623 Understanding and Counseling Minorities (2) PPSY majors only. An examination of the intrapersonal, interpersonal, and impersonal understandings of various minorities and of possible counseling skills and strategies which may be utilized in counseling minorities.

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 628 Behavioral Counseling (2) Prerequisites PPSY 607 and PPSY 618. PPSY majors only. Study of behavioral counseling techniques in a therapeutic setting, emphasizing direct intervention. Practice under staff supervision.

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 647 Psychological Aspects of Learning Disabilities (2) Theoretical and evaluative strategies for understanding and remediating dysfunctions of psychological processes including perceptual, integrative, and expressive manifestations.

PPSY 650 Psychology of the Healthy Personality (2) Investigates humanistic and existentially oriented research and commentary regarding positive mental health and development of healthy personality.

PPSY 652 Legal Issues in Counseling (1) Taken concurrently with PPSY 653. PPSY majors only. An overview of the relationship of law in the fields of psychology, counseling, and education. The impact of litigation and legislation is examined in regard to professional practice.

PPSY 653 Ethical Issues in Counseling (1) Taken concurrently with PPSY 652. PPSY majors only. An overview of the relationship of ethics in the fields of psychology, counseling, and education. The impact of ethical standards is examined in regard to professional practice.

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) Graduates 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 Psychology (3) An overview of the interrelationship of law and ethics in the fields of psychology, counseling, and education.

PPSY 659 Group Laboratory Experience: Agency (1) Prerequisite: permission of practicum coordinator. Taken concurrently with PPSY 662. PPSY majors only. Provides an opportunity to participate in a group experience facilitated by an advanced doctoral student or faculty member. S/U grade.

PPSY 660 Systems Analysis and Consultation Theory (2) Overview systems and strategies for systems change, stressing consultation theory and social action strategies, and including mental health, behavioral consultation and organizational development.

PPSY 661 Consultation in Counseling (1) PPSY majors only. Overview of consultation strategies including mental health, behavioral consultation, and organization development as they relate to the agency settings.

PPSY 662 Group Dynamics and Facilitation (2) Prerequisite: permission of practicum coordinator. Taken concurrently with PPSY 659. PPSY 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) Prerequisite: consent of instructor. Serve as research apprentice to faculty member; must complete minimum of 2 semester credits, 75 clock hours each.

PPSY 664 Therapeutic Parenting (2) The application and appropriate utilization of therapeutic parenting techniques in academic and mental health settings.

PPSY 665 Family Systems (2) 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. PPSY majors only. Study basic theories of relationship therapy and technical interventions utilized within the major approaches to couple/marital therapy. Also includes spouse abuse, divorce mediation and adjustment, and ethical considerations.

PPSY 667 Human Sexuality for Counselors (2) For counselors and helping professionals. Increase effectiveness in dealing with sexuality issues. Emphasize exploration and understanding of counselor attitudes toward human sexuality and those influencing counseling process.

PPSY 668 Principles of Sex Therapy (2) Prerequisite PPSY 667. PPSY majors only. Study various therapeutic approaches to treating sexual concerns and dysfunctions including causes and treatment of sexual dysfunctions, ethical issues, research findings, and implications.

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 nonstandardized 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 673 Individual Tests of Intelligence and Personality (2) 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 Personality Assessment (3) Prerequisite: PPSY 674 or PPSY 675 and consent of instructor. Projective and nonprojective techniques of assessing personality, including theory, administration, and interpretation. Under supervision, integrate instrument results into a comprehensive diagnostic and descriptive written profile.

PPSY 678 Practicum in Personality and Clinical Assessment (5) Prerequisites: PPSY 674 or 675 and permission 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.

PPSY 681 Systems Intervention Practicum (3) Prerequisite: PPSY 660 and consent of instructor. Supervised field experience with professional seminar. Apply strategies from PPSY 660 in schools, mental health, or criminal justice agencies. Consultation as primary intervention strategy.

PPSY 692 Externship (2-8) Prerequisite: permission of practicum coordinator. PPSY majors. 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. Maximum 8 hours credit required. Minimum of 600 total on site hours required. S/U grade.

PPSY 693 Practicum in Group Facilitation (4) Prerequisites: PPSY 662, PPSY 702, and PPSY 712 and permission of practicum coordinator. Receive supervised experience in the role of group facilitator, including feedback on group process, leadership and intervention skills, and problem areas. Requires a minimum of 12 hours per week. PPSY majors only. S/U grade.

PPSY 694 Practicum in Family Therapy (4) Prerequisites: PPSY 712, PPSY 666 and permission of practicum coordinator. PPSY majors. 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 grade.

PPSY 695 Seminar: Contemporary Issues in Family Therapy (2) Prerequisites: PPSY 665 and PPSY 666. PPSY majors. In-depth study of current issues and research in family therapy. Topics change with each offering.

PPSY 702 Practicum in Counseling (2) Prerequisite: permission of practicum coordinator. PPSY majors. Supervised individual counseling experiences in a laboratory setting. Supervision will be directed toward improvement of counseling skills and case management. S/U grade.

PPSY 707 Seminar in Personality and Counseling Theories (3) PPSY majors. 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: permission of practicum coordinator and PPSY 702 and PPSY 707. PPSY majors. 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 grade.

PPSY 713 Practicum in Supervision of Play Therapy (3) Prerequisites: permission of practicum coordinator and PPSY 617 and PPSY 665. PPSY majors. 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 and PPSY 712 and permission of practicum coordinator. PPSY majors. Students gain experience with a faculty member in supervising counseling practice. Maximum 6 hours credit.

PPSY 715 Seminar in Counselor Supervision and Theory (2) Prerequisites: permission of practicum coordinator, PPSY 702, 707, and 712 and taken concurrently with PPSY 714. PPSY majors. Study problems involved in training individuals to engage in the therapeutic process.

PPSY 733 Research Apprenticeship (1) Prerequisite: consent of instructor. PPSY majors only. Serve as an apprentice to a chosen faculty member and work on professional endeavors such as course planning, writing and research, library searches. Requires approximately 3-5 hours per week. Maximum 2 hours credit. S/U grade.

PPSY 755 Supervised Practicum in College Teaching (1-6) Prerequisite: consent of instructor. PPSY majors only. Doctoral students receive experience in observation and supervised practice in college teaching. Maximum 6 hours credit.

PPSY 758 Advanced Psychopathology (3) Prerequisite: PSY 355 or PPSY 558 and 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) Prerequisite: admission to graduate school psychology program. 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 permission of practicum coordinator. PPSY majors. 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 permission of practicum coordinator. PPSY majors. 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) Prerequisite: 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 779 Practicum in School Psychology (3) Prerequisites: PPSY 674 and 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 certified school psychologists.

PPSY 781 Evaluation of Psychological Services (3) Prerequisite: EPRE 602. Learn the theory and practice of psychological program evaluation, taking both a nonstatistical 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) Prerequisite: PPSY 558, PPSY 675, PPSY 676. Learn conceptual basis for comparing projective with traditional psychometric procedures and begin skills in administration and scoring of Rorschach test.

PPSY 789 Internship School Psychology (2-10) Prerequisite: PPSY 674, PPSY 676, PPSY 679 or consent of instructor. Full-time field experience in school psychology under qualified supervisors in selected settings; taken at end of program. Must be taken for minimum of 12 hours credit.

PPSY 791 Internship in Counseling Psychology (4-6) Prerequisite: consent of instructor. PPSY majors: For the doctoral candidate in counseling psychology who will complete a one-year, 12-month, 2,000-hour internship after completion of course work. Register for 4-6 credits per semester for three consecutive semesters of internship.

PPSY 792 Internship in Counselor Education (3-6) Prerequisite: permission 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.

PPSY 793 Intake Practicum (1) Prerequisites PPSY 702, PPSY 712 and permission of practicum coordinator. PPSY majors. 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 grade.

PPSY 794 Clinic Practicum (2) Prerequisites PPSY 702, PPSY 712, PPSY 793 and permission of practicum coordinator. PPSY majors. Students gain experience as staff clinicians in the Psychological Services Clinic by providing direct therapeutic services to clients and engaging in case management procedures. Two consecutive terms required. Maximum 4 hours credit. S/U grade.

PPSY 797 Doctoral Proposal Research (1-4)

Prerequisite: consent of instructor. PPSY majors. Required for all doctoral students. Student may register for 1 to 4 hours of this course in any semester, but 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 grade.

PPSY 799 Doctoral Dissertation (1-12)

Prerequisite: consent of instructor. PPSY majors and admission to candidacy. Required of all doctoral candidates. A student may register for 1 to 12 hours of dissertation credit in any semester but must earn a minimum-maximum of 12 hours of credit for the dissertation in partial fulfillment of requirements for all doctoral degrees. S/U grade.

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 Western European Politics (3)

Prerequisites: PSCI 100 and 105. Analyze comparatively the political systems of European nations, with special emphasis on Great Britain, France and West Germany. Not open to freshmen.

PSCI 220 Introduction to International

Relations (3) Learn the basic principles, processes, and problems of the international political system.

PSCI 300 Public Opinion (3) Analysis of the function of public opinion in policymaking in a democracy and of its formation. Problems in the measurement of public opinion will be addressed. Not open to freshmen.

PSCI 302 The Presidency and Congress (3)

Prerequisites: PSCI 100 and PSCI 105. An examination of the processes and policies of the executive and legislative branches of the U.S. National Government and of the relationship between them. Not open to freshmen.

PSCI 306 Constitutional Law I: Civil

Liberties (3) Prerequisites: PSCI 100 and PSCI 105. Analyze judicial, executive and legislative actions which have threatened, violated and promoted civil liberties, particularly free speech, press and assembly, church-state relations, due process and nationalization of the Bill of Rights. Not open to freshmen.

PSCI 307 Constitutional Law II:

Governmental Powers (3) Prerequisites: PSCI 100 and 105. Survey organization of the U.S. government, particularly relationship between governmental branches and levels. Examine court cases to understand how Supreme Court interpreted Constitutional provisions regarding exercise of governmental power related to federalism and separation of powers. Not open to freshmen.

PSCI 310 East European Politics (3)

Prerequisites: PSCI 100 and 105. An examination of the politics of East Germany, Poland, Czechoslovakia, Hungary, Bulgaria, Rumania, Yugoslavia and Albania and their relationships with each other and the Soviet Union. Not open to freshmen.

PSCI 315 Comparative Public Policy (3)

Prerequisites: PSCI 100 and PSCI 105. 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. Not open to freshmen.

PSCI 320 American Foreign Policy (3)

Prerequisites: PSCI 100 and PSCI 105. Analysis of American foreign policy with emphasis on the Twentieth Century and of the process by which policy is made. Not open to freshmen.

PSCI 321 War and Peace (3)

Examination of the causes and occasions of wars and of the peaceful resolution of international disputes. Not open to freshmen.

PSCI 325 Conflict in the Middle East (3)

Examination of the principal governmental and nongovernmental actors and their policies in the Middle-East and relations among them. Not open to freshmen.

PSCI 331 Political Philosophy I (3)

Analysis and evaluation of the principles and institutions proposed by major philosophers from Plato to Locke. Open only to juniors and seniors.

PSCI 332 Political Philosophy II (3)

Analysis and evaluation of the principles and institutions proposed by major philosophers from Rousseau to Mill. Open only to juniors and seniors.

PSCI 335 American Political Philosophy (3)

Analysis and evaluation of the principles and institutions proposed by major American philosophers from Madison to Dewey. Open only to juniors and seniors.

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.

PSCI 400 Political Parties (3)

Examination of the organization, techniques and policies of American political parties, the voting behavior of the electorate and the problems of representation in a democracy. Not open to freshmen.

PSCI 401 Minority and Interest Group

Politics (3) Analysis of the role of minority and other interest groups in United States politics and of the resources and techniques employed to influence policymaking. Not open to freshmen.

PSCI 405 Problems in American Politics (3)

Prerequisites: PSCI 100, PSCI 105, PSCI 150, and a course in Group A. Select problems in American politics will be examined. Open only to seniors.

PSCI 412 Soviet Politics (3)

Examination of the Bolshevik Revolution and the institutions and processes of government in the Soviet Union. Emphasis placed upon Communist ideology, the party and contemporary problems. Not open to freshmen.

PSCI 415 Problems in Comparative Politics

(3) Prerequisites: PSCI 100, PSCI 105, PSCI 150, and a course in Group D. Topics of current interest or controversy in comparative politics. Open to seniors only.

PSCI 421 Soviet Foreign Policy (3)

Analysis of the formulation and conduct of Soviet foreign policy and of the several interpretations of that policy. Not open to freshmen.

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.

PSCI 425 Problems in International

Relations (3) Prerequisites: PSCI 100, PSCI 105, PSCI 150, and a course in Group B. Select problems and theories for close and lengthy examination. Open only to seniors.

PSCI 435 Problems in Political Philosophy

(3) Prerequisites: PSCI 100, PSCI 105, and a course in Group C. Select problems or philosophies for close and lengthy attention. Open only to seniors.

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 230 Human Growth and Development

(4) Study basic concepts and issues of growth and development from conception through senescence. Emphasis on cognitive, psychomotor and socioemotional development. Required 2-3 hours per week in lab school or community.

PSY 240 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 250 Humanistic Psychology (3) Explore humanistic psychological systems, conceptualizations, models, methods, tools and research, focusing on means of developing understanding of self and others, effective interactions, sensitivity and more humanistic and existentially meaningful life.

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) Prerequisite: STAT 201. Receive an introduction to psychological test theory, interpretation of results, group and individual tests (cognitive, affective and psychomotor), reliability, validity and standardization procedures.

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 interrelationships among physiological, sociological and psychological variables in adult development from early to older adulthood including issues of death and dying.

PSY 340 Cognition (3) Prerequisite: PSY 120. Explore human cognition by examining perception, attention, memory, intelligence, problem solving, and cognitive development. Become familiar with neural bases of cognition, theoretical perspectives and research methods.

PSY 342 Cognitive and Behavioral Change: Theory, Assessment and Application (3) Prerequisites: PSY 120 or EPRE 345. 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) 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 355 Abnormal Psychology (3) Prerequisite: PSY 120. Study abnormal behavior: causes, symptoms, characteristics, classification, prevention and treatment.

PSY 357 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 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, STAT 201. Psychology majors only. Introduction to experimental and correlational research methods in psychology. Includes research report writing, laboratory methods and implementing computer data systems analysis. Two hour lab required.

PSY 407 Introduction to Counseling Theories (3) Prerequisites: PSY 357. 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.

PSY 423 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 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 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 465 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 467 Psychology of Prejudice (3) Understand basic causes of prejudice and how prejudicial behavior is learned and diminished. Experience increased understanding of others.

PSY 480/580 Physiological Psychology (5) (4 lecture, 2 laboratory) Prerequisite: PSY 120, Introduction to BIO/ZOO or equivalent. 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. Two hour lab required.

PSY 481 Comparative Psychology (3) (2 lecture, 2 laboratory) Prerequisite: PSY 120. 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 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 Lifespan Studies (5) 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) Prerequisite: Junior or Senior Psychology. Major and permission 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.

PSY 493 Practicum in Psychology (1-3) Permission of instructor and department chairperson required. Students assist professor with research or laboratory in a psychology course. Thirty-eight (38) clock hours must be spent for each hour of credit. Note: Course title will vary to reflect nature of student's involvement. Students may apply a maximum of four (4) credits to a psychology major. S/U grade.

PSY 495 Special Topics in Psychology (1-5) Scheduled on irregular basis. Explore special topics in psychology. An appropriate subtitle will explain each course.

PSY 508 Workshop (1-5) Offers a variety of workshops on special topics. Each has a subtitle, and no subtitle may be repeated for credit.

PSY 513 Professional Renewal (1-5) Improve skills and knowledge as a professional in the discipline. Variable in content, specific subject matter will be indicated in course subtitle when offered. No subtitle may be repeated for credit.

PSY 480/580 Physiological Psychology (5) (4 lecture, 2 laboratory) Prerequisite: PSY 120, Introduction to BIO/ZOO or equivalent. 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. Two hour lab required.

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. No subtitle may be repeated for credit. Check department office for topics currently planned.

PSY 601 Research Seminar (1) 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 in Behavioral Medicine (3) Develop skills in diagnostic interviewing and assessment procedures used in the field of behavioral medicine.

PSY 621 Practicum in College Teaching of Psychology (1) Master's students arrange with individual faculty to receive experience in observation and supervised practice. 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.)

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 Advanced Neuropsychology (4) PSY 355, PSY 375, PSY 480. 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 (4) 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 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) 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 697 Master's Project (2) May be repeated once for total of four credits. 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 grade.

PSY 699 Thesis (2) May be repeated once for total of 4 credits. Recommended in place of M.A. project, especially for students applying to doctoral programs. S/U grade.

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 (2) 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, and discuss current issues in aging and recreation. Visits, observations, and practicum required.

REC 252 Social Recreation (2) Through discussion and practical experiences, study the effective leadership methods and techniques used in social recreation programming. Activities appropriate for various age groups and community organizations will be discussed and practiced. Practicum required.

REC 253 Camp Counseling (3) Study methods of leadership in camping activities, particularly the development and application of outdoor skills. Practicum required.

REC 265 Recreation Skills (3) A course designed to acquaint the recreation major with the skills necessary to effectively organize and conduct various recreation activities. Sports and games, cultural arts, outdoor recreation, community center and playground skills are covered in depth.

REC 267 Outdoor Recreation Programming and Skills (3) Discover the involvement of the various agencies and organizations that deal with outdoor recreation planning and programming. Experience the effective planning, organization and management of outdoor programs and gain knowledge and skills from experience in many outdoor activities.

REC 350 Cultural Arts in Recreation and Leisure (3) An overview of vocal and instrumental music, visual arts, dance and theater arts, with an emphasis on understanding the various disciplines. Discover the particular needs of each discipline as to enhance recreation programming in the arts. Programming and marketing techniques will be discussed. Visits and observations required.

REC 369 Management of Recreation Facilities (2) Prerequisites: REC 203, 265. Emphasis on the management of selected recreation facilities such as recreation centers, pools, and athletic complexes in this introduction to the principles and practices of operating those facilities.

REC 408 Workshop in Recreation (1-3) Opportunities for study in professional interest areas of participants, but varying according to experts conducting the workshop. Each workshop has a subtitle and no subtitle may be repeated for credit. S/U grade.

REC 415 Clinical Aspects of Therapeutic Recreation (3) Prerequisite: Consent of instructor. 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) Consent of instructor. 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: consent of instructor. 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.)

REC 426 Seminar in Recreation Program Development for Special Populations (3) Study the foundations, principles and procedures utilized in developing recreation programs for special populations such as the handicapped, disabled, older adults, etc. Study the current trends in therapeutic recreation program delivery through reading and research.

REC 451 Administration of Leisure Delivery Systems (3) Prerequisite: REC 369, 468, and 472. 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 452 Internship in Recreation (12) Prerequisites: REC 369, REC 468, REC 451, REC 472, REC 495. Prerequisite: 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 fulltime activity under professional guidance.

REC 468 Programs in Recreation (3) Prerequisites: REC 203, 204, 265, and 369. 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 472/572 Recreation Leadership (3) Prerequisite: REC 203, 265, and 369. 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 Advanced Internship in Recreation (12) Prerequisite: REC 452 or consent of instructor. Open only by permission of department chair. Serves in an advanced capacity within a professional setting under professional supervision in a fulltime activity.

REC 495 Senior Seminar (2) Research, observe, participate, present and finalize the necessary requirements before enrolling in REC 452 Internship in Recreation.

REC 508 Workshop in Recreation (1-3) Study professional interest areas of participants with variation according to experts conducting workshop. Each workshop has a subtitle and no subtitle may be repeated for credit. S/U grade.

REC 515 Clinical Aspects of Therapeutic Recreation (3) Prerequisite: Consent of instructor. 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. Graduate students will review current research and evaluation data. Special projects and presentations will be required. Restricted course.

REC 516 Procedures and Techniques of Therapeutic Recreation (3) Prerequisite: Consent of instructor. 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. Graduate students will survey the procedures currently used in the region and nationally and present a special evaluation project. Restricted course.

REC 521 Contemporary Problems in Therapeutic Recreation (3) Prerequisite: Consent of instructor. Study history, philosophy and practice of providing recreation services to special populations. Study organization, leadership and administration of therapeutic recreation in community programs and in treatment center. Explore current issues and research data and its implications through observation, visits, reading, reports, discussions and special projects.

REC 526 Seminar in Recreation Program Development for Special Populations (3) Study the foundations, principles and procedures utilized in developing recreation programs for special populations. Study the current trends in therapeutic recreation program delivery. Special project, required reading and study problems to research out of class, and presentation of study problem and project to class.

REC 568 Programs in Recreation (3) Plan to effectively program recreation facilities and individual needs in the community recreation setting. Emphasis will be given to researching the issues and trends of present-day programming techniques. A graduate quality paper and presentation will be required.

REC 472/572 Recreation Leadership (3) 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 610 Evaluation of Recreation and Leisure Services (3) Be acquainted with evaluation and research in the field of parks and recreation services. Accomplish an actual evaluation in a recreation setting. Visits and practicum required.

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.)

REC 652 Graduate Internship in Recreation (3-12) Prerequisite: 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.

REC 675 Areas and Facilities in Physical Education and Recreation (3) Study major processes of planning, construction, and maintenance of varied types of physical education and 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 the problem solving model.

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) Prerequisite: 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 course work before internship.

Science Education

SCED 441/541 Methods of Teaching Secondary School Science (3) Prerequisite: Full admission to PTE or certification at the undergraduate level. 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) Prerequisite: Full admission to PTE or certification at the undergraduate level. Develop a knowledge of objectives, methods and materials needed for teaching a functional elementary science program. Laboratory fee required.

SCED 508 Workshop (0.5-6) Study a topic of Science Education for up to 4 weeks. Course may be repeated with different topics but total may not exceed 6 credit hours. Each workshop will be subtitled and no subtitle may be repeated for credit.

SCED 513 Professional Renewal (1-12) Study a topic in science education for four to fifteen weeks. Course may be repeated with different topics but total may not exceed 12 credit hours.

SCED 520 Problems in Teaching Physics (3) Prerequisite: Permission of the 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. 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. 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.)

SCED 671 Science Curriculum in the Elementary School (2) Analysis and evaluation of elementary science programs in terms of theory and research in science curriculum development including teaching strategies and the influence of controversial issues on teaching elementary science.

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) Course may be repeated for a maximum of 4 credits. Investigate current science education research, report on topics of interest in recent literature, discuss individual research problems.

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 (3) Survey physical science concepts of current interest. Primarily for the student with limited science background. Taught by Physics or Chemistry. Optional laboratory available (SCI 104).

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 108 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) 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. Optional laboratory available (SCI 111).

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 nonmathematical 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 underrepresented 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 265 Physical Science Concepts for Elementary Teachers (3) (2 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 390 Computer Programming in Science (2) (1 lecture, 2 laboratory) Prerequisite, MATH 125. BASIC language programming and its applications to problems in science.

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 393/593 The Computer in the Science Classroom (2) (1 lecture, 2 laboratory) Computer fundamentals and operation, an introduction to computer programming language, evaluation, modification, generation of science software, integration of the computer into the science classroom and interfacing equipment in the science laboratory.

SCI 505 Physical Science Concepts (3) For elementary/middle school teachers. Fundamental concepts of physical science are considered in a lecture/ laboratory setting.

SCI 508 Science Workshop (1-4) A subject matter workshop course designed to improve the science background of teachers. Course may be repeated with different topics and subtitles. No subtitle may be repeated for credit.

SCI 513 Professional Renewal (1-8) Study a science-related content area of importance to K-12 teachers. No subtitle may be repeated for credit.

SCI 535 Principles of Physics I (3) (2 lecture, 1 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, 1 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, 1 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, 1 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.

SCI 393/593 The Computer in the Science Classroom (2) (1 lecture, 2 laboratory) Computer fundamentals and operation, an introduction to computer programming language, evaluation, modification, generation of science software, integration of the computer into the science classroom and interfacing equipment in the science laboratory.

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 problem and related social policy implications. Definitional and social causation models of social problems are examined.

SOC 175 Science, Technology and the Future (3) Examine science and technology as they influence human relations and society. Explore various views of the future and prospects for humanity based upon science and technology.

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 theories that analyze change as the product of multiple social factors. Explore the processes of change in underdeveloped countries with change in developed countries.

SOC 237 Sociology of Minorities (3) Deal with evidence from all types of intergroup relations: race, nationality, minority groups, income groups, urban and rural groups, and methods of teaching and measuring intergroup relations.

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 these 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 which 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 in a critical perspective.

SOC 275 Sociology of Mental Illness (3) Prerequisite: SOC 100 or equivalent. Sociological perspectives on mental illness. Examine conceptual models of mental illness, social epidemiological help-seeking behavior, social impacts of treatment, mental health delivery systems, and social policy issues.

SOC 277 Social Movements (3) Prerequisite: SOC 100 or equivalent. Explore significant aspects of unconventional political, economic, religious, and cultist organizations. Study institutionalized and uninstitutionalized groups and their members.

SOC 278 Sociology of 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 302 Variable Topics in Sociology (3) Prerequisite: SOC 100 or equivalent. May be taken up to 3 times under different topics. Topics may include sociology of religion, human ecology, social conflict, fascism, urban sociology, etc.

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 conditions 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 or equivalent. 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. Introduce research methodologies in the social sciences. Study the logic of research, role of theory, measurement, sampling, and research designs.

SOC 362 Social Statistics (3) Prerequisite: SOC 100 or equivalent. 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 377 Soviet Society Today (3) Prerequisite: SOC 100 or equivalent. View sociologically the culture, structure and process of social institutions in the Soviet Union including pro and con perspectives of lifestyles, human rights, work, arts and Marxist ideology.

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.)

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 490 Internship (3) Prerequisites: SOC 100 or equivalent. Study the basic principles of field research by working as a volunteer intern with a community service agency.

SOC 508 Workshop (2-6) Graduate Students only. Focus on applied aspects of sociology or sociological research. Subject determined by subtitle.

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) Introduce research methodologies in the social sciences. Study the logic of research, role of theory, measurement, sampling, and research designs.

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) 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) May be taken 3 times if topic is different each time. 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.

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.)

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 650 Sociological Theory (3) Prerequisite: SOC 352 or equivalent. Analyze sociological theory development from Comte to present, emphasizing various European and American "schools." Systematically learn concepts of sociological theory for orientation to frames of reference for viewing human interaction.

SOC 660 Advanced Social Research (3) Examine the scientific method as it applies to sociology, advanced research designs and techniques used in sociological research, developing and testing of hypotheses and basic statistical tools used in research.

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.

SOC 699 Thesis (1-10) Required of Master of Arts Candidates in Sociology on recommendation of major advisor.

Social Science

SOSC 341 Teaching Secondary Social Studies (3) Prerequisite: Full admission to PTE or certification at the undergraduate level. 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) Prerequisite: Full admission to PTE or certification at undergraduate level. 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 equivalent. Designed to perfect the communicative skills. Fluency and pronunciation are very important. Emphasis on the Hispanic culture and 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: Three years of high school Spanish or equivalent. 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 precolumbian 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, 302, 303, 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) 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) 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) 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) 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.)

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 U.S. 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 Theater of Social Protest; and the United States' Hispanic Theater 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: Three years of high school Spanish or equivalent. 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 (1-6) A study of topics relating to Spanish language and literature. Will be designed according to the interest of the student and expertise of the instructor.

SPAN 510 Advanced Placement Program-Spanish (3) 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.

SPAN 513 Professional Renewal (1-6) A study of topics relating to Spanish. Will be designed according to the interest of the student and the expertise of the instructor.

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 U.S. 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 which manifest themselves in the everyday life of the Hispanic people. Customs and traditions will be emphasized.

SPAN 570 Readings in U.S. Hispanic Literature (1-3) Prerequisite: Three years college Spanish or equivalent. Designed to cover literature in English or Spanish by U.S. Hispanics: Mexican, Cuban, or Puerto Rican Americans. Readings in narrative, theater, poetry. Content is variable and determined by instructor.

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.

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.

SPAN 573 National Literatures (2) Prerequisite: Three years of college Spanish or equivalent. This course will 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. This course 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.

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. This course will include the study of the semantic, phonological, and syntactic characteristics of the Spanish language dialects spoken in the U.S. 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.)

Speech Communication

SPCO 100 Basics of Public Speaking (3) (1 lecture, 2 laboratory) Learn basics of public speaking, focusing on oral skill development.

SPCO 101 Public Communication (3) (1 lecture, 2 laboratory) Prerequisite: ENG 122. Learn principles and practices of public speaking including composition, argumentation, persuasion, and delivery.

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 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 the process of gaining knowledge generally and to speech communication inquiry specifically; includes practice with skills of critical thinking, library research and interviews.

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 Nonverbal Communication (3) An overview of current theory and research in nonverbal communication. The course will focus on nonverbal communication message systems and their impact on the communication process.

SPCO 231 Small Group Communication (3) Apply problem-solving and decisionmaking techniques and theories, particularly in the relationship between communication and group variables such as leadership roles and cohesiveness.

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) This course can be repeated for a maximum of 8 credits. Experience intercollegiate forensics; debate and individual events. S/U grade.

SPCO 303 Employment Interviewing (1) From a communication perspective, learn the basic principles and procedures involved in employment interviewing. Participate in video taped role plays as interviewer and interviewee.

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 nonverbal 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 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. These variables will be described through the vehicle of the legal setting.

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) Focus of the course is on curriculum and classroom organization, testing and evaluation, procedures and materials specific to secondary speech communication instruction.

SPCO 353 Methods of Teaching Elementary and Middle School Communication (3) Students must be admitted to PTE before taking this course. This class is essential to students preparing to teach elementary and middle school communication. Focus of this course is on curriculum and classroom organization, evaluation procedures, and teaching materials specific to elementary and middle school communication instruction.

SPCO 421 Psychology of Speech Communication (3) A consideration of the internal correlates of external speech communication behavior, including the interrelationships of speech and thought processes in the developing child as well as in the functioning adult.

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.)

SPCO 424 Communication in Conflict (3) Gain a better understanding of the process of conflict and the nature of communication involved in that process.

SPCO 431 Communication and Leadership

(3) Examine theories of leadership, major leadership research findings, and various leadership methods. Consider how the principles derived from leadership literature can be applied to small group and organizational settings.

SPCO 432 Decision Making (3) Examine communication concepts and theories inherent in the processes involved in decision making.

SPCO 442 Rhetorical Theory (3) Explore the contributions to rhetorical theory from Corax to the present.

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) Course may be repeated for a maximum of 6 credits under different subtitles. Investigate issues of current concern, with subjects varied according to faculty expertise and student need.

SPCO 491 Advanced Speech Communication Theory (3) Semmative 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.

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 five semester credit hours may be counted toward the major.

SPCO 510 Communication Development (3) An examination of current theory and research concerning the critical developments in communication behavior throughout the life-span.

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 513 Nonverbal Communication (3) Investigate nonverbal aspects of symbolic communication. Particular emphasis will be paid to current research and theory in the area.

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 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 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) Focus of the course is on curriculum and classroom organization, testing and evaluation, procedures and materials specific to secondary speech communication instruction.

SPCO 461/561 Seminar in Speech Communication (1-3) Course may be repeated for a maximum of 6 credits under different subtitles. Investigate issues of current concern, with subjects varied according to faculty expertise and student need.

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. May be repeated for a maximum of 6 semester credit hours.

SPCO 604 Rhetorical Theory (3) Systematic review of the major contributions of rhetorical theorists for their probable impact on communication.

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.)

SPCO 699 Thesis (1-6) Optional for Master of Arts candidates on recommendation of major advisor.

Statistics

STAT 201 Introduction to Statistical Analysis I (3) Prerequisite: MATH 123 with the grade of "C" or better. 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 301 Statistics for Health Sciences (3) Prerequisite: MATH 123 with the grade of "C" or better. 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 310 Basic Statistical Methods I (4) Prerequisite: MATH 124 or equivalent with the grade of "C" or better. Development of descriptive and inferential statistics. Topics to include frequency distribution, estimation techniques. Course primarily for STAT minors.

STAT 311 Basic Statistical Methods II (4) Prerequisite: STAT 310 or equivalent with the grade of "C" or better. Testing hypothesis, ANOVA, chisquare analysis, nonparametric techniques and introduction to regression. Course primarily for statistics minors and major emphases.

STAT 395 Topics in Applied Statistics (1-4) Prerequisite: 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. May be repeated under different titles.

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.)

STAT 501 Statistical Methods I (4) Prerequisite: MATH 123 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 unweighted 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 551 Introduction to Mathematical Statistics I (4) Prerequisite: STAT 350. Study distributions of discrete and continuous random variables, moments and moment-generating functions, marginal and conditional distributions, distributions of function of random variables, t, F, and chi-square distributions. Study of interval estimation, maximum likelihood estimates.

STAT 552 Introduction to Mathematical Statistics II (4) Prerequisite: STAT 551. Study tests of hypothesis, ANOVA, noncentral t, F, and chi-square distributions, distributions of order statistics, stochastic convergence, central limit theorem and limiting distribution theory; sufficient statistics and completeness property.

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 discriminant function.

STAT 606 Multiple Linear Regression Models (3) Prerequisite: STAT 502. Take the matrix approach to continuous and categorical variables, polynomial and selected nonlinear models; formulation of ANOVA and ANCOVA designs and collinearity; regression methods; backward elimination, forward selection, stepwise and stagewise; and part-regression.

STAT 607 Nonparametric Statistics (3) Prerequisite: STAT 502. Study nonparametric 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 nonresponse, and sources of nonsampling errors.

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 622 Directed Studies (1-3) Individualized investigation under the direct supervision of a faculty member. (Minimum of 25 clock hours required per credit hour.)

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.

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. S/U grade.

STAT 699 Thesis (1-6) Optional for Master of Science program in Applied Statistics and Research Methods.

STAT 742 Seminar (1-4) Prerequisite: STAT 605 or consent of instructor. Study advanced topics in statistics, mathematics, research design and information processing.

STAT 755 Supervised Practicum in College Teaching (1-6) Practice college teaching under supervision. S/U grade.

STAT 797 Doctoral Proposal Research (4) Required of all doctoral students. Although the student may register for 1-4 hours in any semester, the student must earn a minimum of 4 hours of credit in partial fulfillment of requirements for admission to candidacy. S/U grade.

STAT 799 Doctoral Dissertation (1-12) Required of all doctoral candidates. Although the student may register for 1-12 hours of dissertation credit in any semester, the student 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 grade.

Teaching English as a Second Language

TESL 301 TESL Practicum I (2) A beginning level field experience in Teaching English as a Second Language.

TESL 302 TESL Practicum II (2) Prerequisite: TESL 301. An intermediate/ advanced level field experience for students taking a TESL minor.

Theatre Arts

THEA 100 Individual Performance in Theatre (2) Participation in Little Theatre of the Rockies productions. Open to all UNC students. Student must participate in 90 hours. Unlimited repeatability.

THEA 110 Development of Stagecraft (3) (2 Lecture, 1 Lab) A survey of the development of staging practices from 5th Century B.C. to the present. Traces the evolution of the physical theatre, scenery, lighting, technology and modern stagecraft.

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 Fundamentals of Theatre (3) Required for majors. 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 160 Beginning Acting (2) The emphasis of the course is on the primary needs of acting: emotional recall and recreation, concentration, motivation, personality and character development, physical and vocal ingredients of character, and believability.

THEA 190 Stage Speech I (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 permission of instructor. The final course in a two-course series dealing with the development of intelligent use and care of the speaking instrument. The focus is on dialects and accents.

THEA 210 Graphics and Management (3) (2 Lecture, 1 Lab) Prerequisite: THEA 110, 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 220 Beginning Stage Costuming (2) Introduction to the techniques of basic costuming for the theatre: the role of the costumer, pattern and construction, costume history and a familiarity with materials and practices relating to play production.

THEA 240 Beginning Stage Directing (2) Prerequisites: THEA 110, THEA 135 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 260 Scene Study (2) Prerequisite: THEA 100. 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 261 Stage Make-up I (1) Prerequisites: THEA 160. A basic course designed to acquaint the student with the principles of stage make-up.

THEA 270 Stage Movement I (1) (2 contact hours per week) Prerequisite: THEA 135. A laboratory course in the preparation of the actor's skills in movement. Emphasis upon body/mind techniques.

THEA 271 Stage Movement II (1) (2 contact hours per week) Prerequisite: THEA 135. A laboratory course in the preparation of the actor's skills in movement. Emphasis upon period movement.

THEA 281 Improvisation and Creative Dramatics (2) 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. S/U grade. Unlimited repeatability with different course title/content.

THEA 310 Beginning Scene Design (3) (2 Lecture, 1 Lab) 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 220 or permission 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 (2) Prerequisite: THEA 240 and 330. 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 (2) Prerequisite: THEA 240 and 331. 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) Prerequisite: acceptance by Theatre Arts staff. Eight weeks of eight-hour daily rehearsals for summer productions. May be repeated for maximum 40 hours credit.

THEA 353 Theatre Production (2) (6 contact hours per week) Prerequisite: acceptance by audition only. Production and presentation of touring theatre before live audiences in this laboratory class. May be repeated for maximum 8 hours credit.

THEA 361 Advanced Stage Make-up (1) Prerequisite: THEA 261 or permission of the 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 370 Stage Movement III (1) (2 contact hours per week) A laboratory course in the preparation of the actor's skills in movement. Emphasis upon stage combat.

THEA 371 Stage Movement IV (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 385 Methods of Teaching Drama in the Secondary School (2) PTE prerequisite to student teaching. Taken concurrently with EDLS 363. 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) May be repeated for maximum 8 hours credit.

Prerequisite: 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.

THEA 410 Advanced Design and Technology (3) 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.

THEA 411 Stage Lighting (3) (2 Lecture, 1 Lab) 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 Lab) Prerequisites: THEA 220, 320, 330, 331, or permission 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.

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.)

THEA 440 Directing the One-Act Play (1) Prerequisite: THEA 340 or 341 or permission of the instructor. Produce a one-act play under instructor's supervision. Extensive promptbook and well-written self-analysis required.

THEA 460 Advanced Acting Styles I (2) Prerequisites: THEA 160 and THEA 330 or permission of the instructor. Concentration on period styles including Greek, Elizabethan, Commedia dell'Arte, English Restoration, and French Neo-classic in this advanced acting laboratory. May be repeated for a maximum 4 hours credit.

THEA 461 Advanced Acting Styles II (2) Prerequisites: THEA 160 and THEA 331 or permission of the instructor. Focus on modern drama from early realism through contemporary eclectic styles in this advanced acting laboratory. May be repeated for a maximum 4 hours credit.

THEA 464 Audition Techniques (2) Prerequisites: THEA 160, 260, 460, and 461. 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 Theatre 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 grade. Unlimited repeatability with different course title/content.

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) Prerequisite: 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.

THEA 610 Seminar in Technical Theatre (3) Prerequisites: THEA 310, THEA 411 or THEA 420 or permission of instructor. May be repeated for credit. A seminar to study specialized topics in scene design, stage lighting, theatre architecture, staging techniques or stage costuming. Emphasis is placed on research study.

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.)

THEA 630 Seminar in Theatre History (3) Prerequisites: THEA 330 and 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) May be repeated for a maximum of 6 hours credit. Study the practical application of various theories of acting and directing. Emphasis is placed on research study.

THEA 650 Graduate Summer Theatre (10) Prerequisite: Acceptance by Theatre Arts staff. May be repeated for maximum 30 hours credit. 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.

THEA 685 Seminar in Educational Theatre (3) May be repeated for maximum 9 hours credit. 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.

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.

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: Women in Crisis (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 Women's Studies Workshop (1-3) Cover specific issues in Women's Studies, examining one issue intensively to be announced in advance of the semester offered.

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 U.S. History (3) Research and interpret the contributions of women to the history of the United States. Review history through a feminist perspective.

WS 373 Women-Identified Theory (3) This course will critically analyze lesbian studies, literature, and theory from a feminist perspective.

WS 422 Directed Studies (1-3) Qualified undergraduates research a problem or issue of concern to Women's Studies in consultation with the instructor. Copies of well-written paper filed with instructor/program.

WS 448/548 Women's Studies Senior Seminar (3) Prerequisites: WS 148 and 10 semester credits in approved Women's Studies electives. Primarily for students enrolled in the Women's Studies Program. 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) Prerequisite: 9 semester credits in approved Women's Studies courses. Supervised field practice on research relating to women's concerns and issues. Paper analyzing experience required.

WS 508 Women's Studies Workshop (1-3) Cover specific issues in Women's Studies, examining one issue intensively to be approved in advance of the semester offered.

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 U.S. History (3) Research and interpret the contributions of women to the history of the United States. Review history through a feminist perspective. Special assignments for graduate students.

WS 448/548 Women's Studies Graduate Seminar (3) Prerequisite: Enrollment in Graduate Interdisciplinary Degree Program 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.)

WS 692 Internship (2-10) Prerequisite: Knowledge of Women's Studies techniques and concerns. Supervised field practice on research relating to Women's Studies concerns and issues. Graduate-quality paper analyzing experience required.

Zoology

ZOO 115 Human Biology (3) (2 lecture, 3 laboratory) The study of the 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, Reptiles (4) (3 lecture, 3 laboratory) Prerequisite: BIO 111. Investigate the biology of the cold-blooded vertebrates including their evolution, ecology and behaviors. 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, 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. Course may be taken up to two times with different topics.

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.)

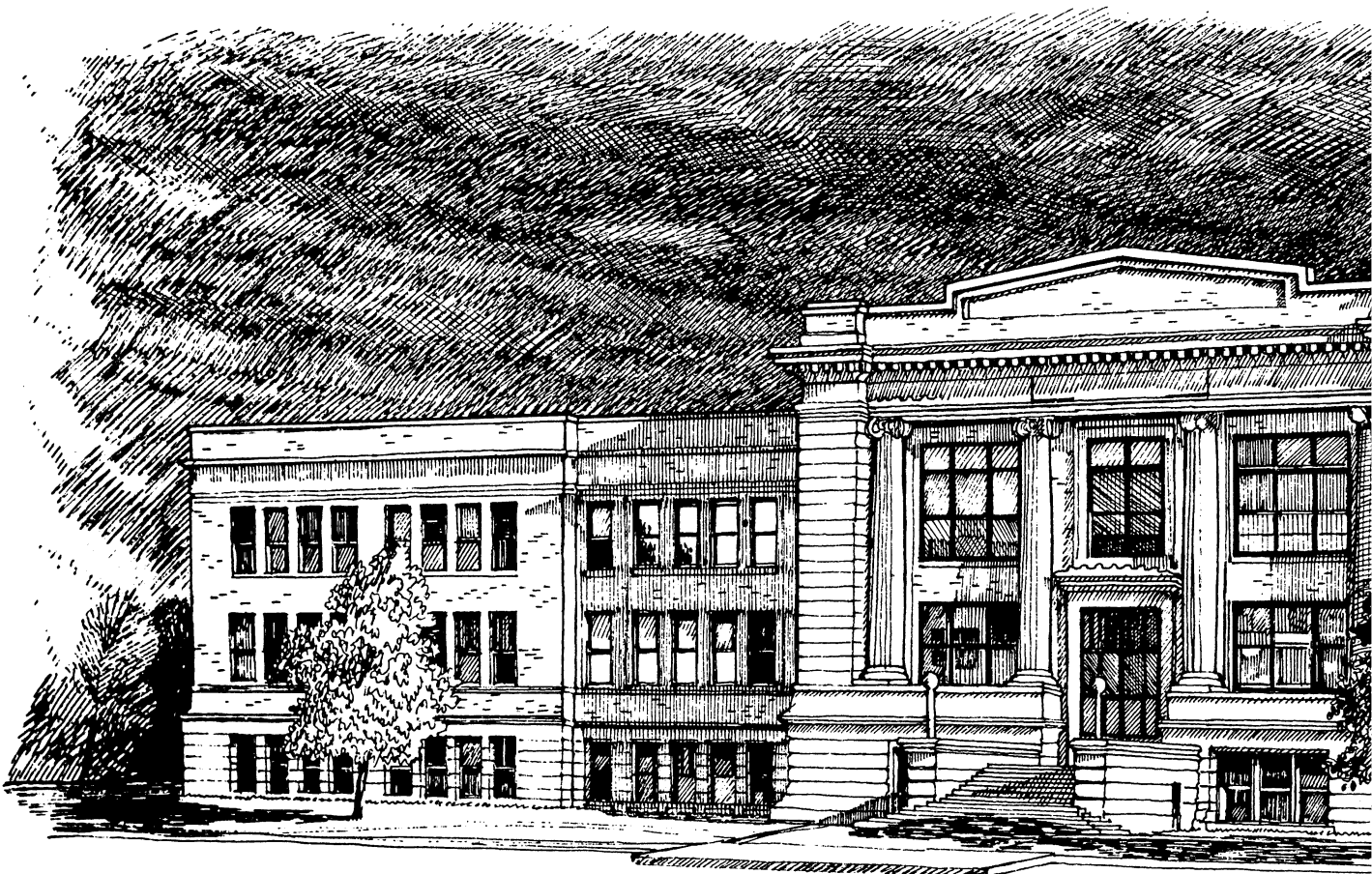
ZOO 636 Advanced Invertebrate Zoology (4) (3 lecture, 3 laboratory) Prerequisite: ZOO 332. Compare the classification, anatomy, physiology, morphogenesis and national history of the invertebrates, exclusive of insects and most parasitic forms.

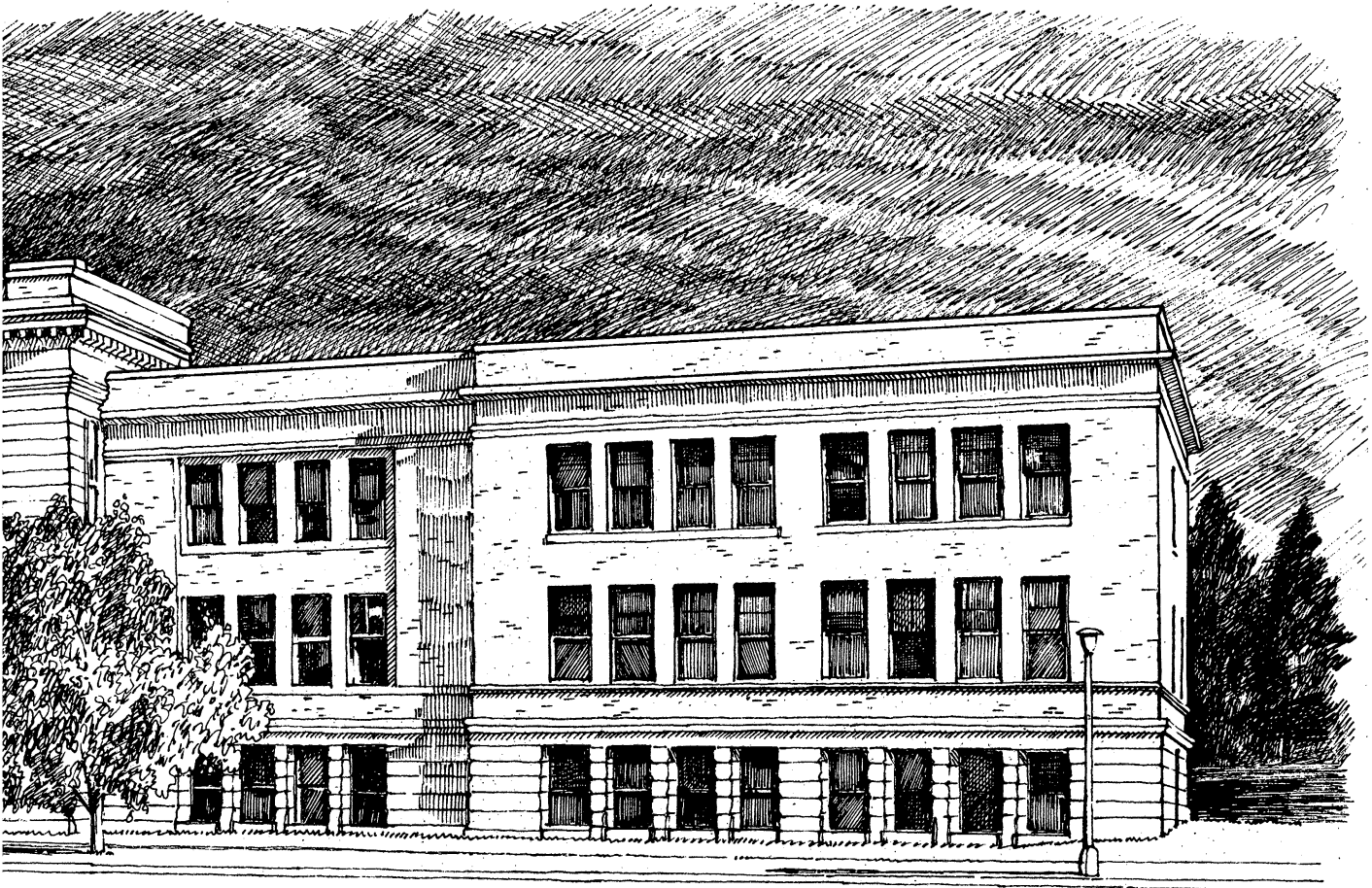
ZOO 645 Comparative Vertebrate Adaptations (4) (3 lecture, 3 laboratory) Prerequisites: ZOO 345 and ZOO 350. Make a detailed study of selected aspects of vertebrate anatomy, stressing function and adaptive significance of organ systems. Deliver one seminar on specialized topic.

ZOO 699 Thesis (1-10) Prerequisite: BIO 694. Course may be repeated but total may not exceed 10 credit hours.

IV

Administration and Faculty





Board of Trustees

Beverly L. Biffle, Denver (1977-1989)
Mary T. Gittings, Denver (1985-91)
Edmundo A. Gonzales, Denver (1985-1991)
Mark G. Grueskin, Denver (1987-1989)
Luanne C. Hazelrigg, Evergreen (1987-1991)
Robert G. Tointon, Greeley (1984-1990)
Dee P. Wisor, Englewood (1987-1990)
John E. Loftis, III (1987-1989) Faculty Trustee
Michael J. McArdle (1987-1989) Student Trustee

Claude J. Johns, Jr., Secretary
Stephen T. Hulbert, 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

Robert C. Dickeson (1981) — B.A., M.A., Ph.D., University of Missouri-Columbia (G)

Provost and Vice President for Academic Affairs

James E. Walker (1987) — B.S., Alabama State University; M.A., Atlanta University; Ed.D., Pennsylvania State University (G) (DR)

Vice Presidents

Stephen T. Hulbert, (1988) Administrative Services — B.S.Ed., Worcester State College; M.Ed., University of Massachusetts at Amherst; D.Ed., State University of New York at Albany

Claude J. Johns, Jr., (1976) University Relations — B.S., M.S., Florida State University; M.A., University of Denver; Ph.D., University of North Carolina (G) (DR)

Nancy A. Scott, (1984) Student Affairs — B.S., M.A., Ed.D., University of Colorado (G) (DR)

Assistants to President

David J. Figuli, (1983) Legal Services — B.A., J.D., Cleveland State University (G)

Antonio L. Carvajal, (1971) Assistant — B.S., Sul Ross State University; M.S., East Texas State University; Ed.D., University of Northern Colorado (G) (DR)

Jessica Kozloff, (1976) Executive Assistant — B.S., M.A., University of Nevada; Ph.D., Colorado State University (G)

Associate Vice President

E. James Hindman, (1988) Academic Affairs — B.A., M.A., Ph.D., Texas Tech University

Assistant Vice Presidents

John W. Fox, (1977) Academic Affairs — B.S., Michigan State University; M.A., Ph.D., Western Michigan University (G) (DR)

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 (G)

Assistant to the Vice President for Student Affairs

Thomas J. Gavin (1984) — B.S., Wisconsin State University; M.A., Ball State University; Ph.D., University of Oregon (G)

Assistant to the Vice President for University Relations

Leanna K. Anderson (1978) — B.A., Ed.S., University of Northern Colorado

Dean of Students

Jean L. Schober (1974) — B.S., Bowling Green State University; MAT, Oakland University; M.A., Bowling Green State University

Registrar

Charles E. Selden (1971) — B.A., Kansas Wesleyan University; M.S., Fort Hays State University

Internal Auditor

Richard R. Kosht (1975) — B.A., University of Northern Iowa; M.B.A., University of Denver; C.P.A.

College of Arts and Sciences

Roger A. Kovar, (1970) Dean — B.A., Doane College; Ph.D., University of Wyoming (G) (DR)

John K. Gapter, (1963) Associate Dean — B.S., M.S., Ph.D., Colorado State University (G) (DR)

Maria Lopez, (1972) Assistant Dean — B.A., University of Northern Colorado; M.A., Ph.D., University of Iowa

College of Business Administration

William L. Duff, (1969) Dean — B.A., San Francisco State University; M.S., Sc., University of Stockholm; Ph.D., University of California at Los Angeles (G)

Robert Lynch, (1973) Associate Dean — B.A., State University of New York; Ph.D., University of Northern Colorado (G) (DR)

Robert C. Harris, (1969) Assistant Dean — B.A., M.A., University of Northern Iowa (G)

College of Education

Gene E. Hall, (1988) Dean — B.S., Castleton College; M.S., Ph.D., Syracuse University

Kyle R. Carter, (1976) Associate Dean — B.A., Mercer University; M.A., Ph.D., University of Georgia (G) (DR)

Michael J. Gimmetad, (1977) Associate Dean — B.A., St. Olaf College; M.S., Indiana University; Ph.D., University of Minnesota (G) (DR)

Harvey Rude, (1980) Assistant Dean — B.S. Moorhead State University; M.A., Ph.D., University of Northern Colorado (G) (DR)

Sandra Simmons, (1983) Assistant Dean — B.S., Grand Valley State College; M.A., Michigan State University

Laboratory School

Gerald E. Christensen (1986) Director — B.S., East Stroudsburg State College; M.Ed., University of North Dakota

College of Health and Human Services

Vincent Scalia, (1977) Dean — B.S., St. Peter's College; M.S., University of Arizona; Ed.D., University of Northern Colorado (G) (DR)

College of Human Performance and Leisure Studies

Brian J. Sharkey, (1986) Dean — B.S., East Stroudsburg State College; M.Ed., West Chester State College; Ph.D., University of Maryland (G)

Robert A. Oliver, (1982) Director, Intercollegiate Athletics — B.S., Erskine College; M.A., Western Carolina University; Ph.D., George Peabody College for Teachers (G)

College of Performing and Visual Arts

Howard M. Skinner, (1963) Dean — B.A., Sterling College, Kansas; B. Mus., M. Mus., MacPhail College of Music; D. Mus., Northwestern University (G) (DR)

Graduate School

Bill R. Brown, (1980) Dean — B.A., M.S., North Texas State University; Ph.S., Texas Christian University (G) (DR)

Mark Clark, (1986) Assistant Dean — B.A., M.A., University of California, Berkeley; Ph.D., Stanford University (G)

Richard N. Bourassa, (1970) Assistant Dean — B.M., University of Idaho; M.A., University of Denver; D.A., Ball State University (G) (DR)

Library Services

Gary M. Pitkin, (1987) Director — B.A., M.A., University of Wisconsin-Milwaukee; Ed.S., Appalachian State University

Division of Aerospace Studies

John J. McBroom, (1988) Chairman — B.S., USAF Academy; M.S., Auburn University

Division of Military Science

Robert Perrich, (1987) Chairman — B.A., San Jose State University; M.S., University of Kansas

Directors

Leanna K. Anderson, (1978) Centennial/Special Projects — B.A., Ed.S., University of Northern Colorado

R. Thomas Barbour, (1984) University News and Publications — B.S., University of Northern Colorado

James K. Bowen, (1966) Resources for Disabled — B.S., M.S., Emporia State University; Ed.D., University of Wyoming (G)

Ronald S. Camp, (1968) Educational Materials Service — A.A., Joplin Junior College; A.B., M.A., University of Missouri

Antonio L. Carvajal, (1971) Center for Dropout Prevention — B.S., Sul Ross State University; M.S. East Texas State University; Ed.D., University of Northern Colorado (G) (DR)

Reiko Clark, (1988) Interim, International Student Services — B.A., Tsurumi Women's College (Japan); M.A., Hofstra University

Alan V. Comedy, (1988) Affirmative Action/Equal Opportunity — B.A. Wilberforce University; M.Ed., Antioch College; J.D., Catholic University of America

Raymond J. Degenhart, (1977) Budget — A.A., Northeastern Junior College; B.S., Colorado State College; M.S., Ph.D., University of Northern Colorado

Patricia Frick, (1983) Corporate and Foundation Relations — B.A., Clarke College

Thomas J. Gavin, (1984) Institutional Research — B.S., Wisconsin State University; M.A., Ball State University; Ph.D., University of Oregon

Kenneth Grimes, (1988) Marcus Garvey Cultural Center — B.A., M.A., Colorado State University

Gary Gullickson, (1988) Admissions — B.A., M.A., University of South Dakota

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 (G)

Lawrence W. Goslin, (1985) Associate Director — B.A., B.S., M.Ed., Ed.S., Ed.D., University of Missouri

Willard G. Jones, (1969) Grants and Contracts — B.A., M.S., Kansas State Teachers College; Ed.D., University of Wyoming (G) (DR)

Bernard C. Kinnick, (1966) Student Health Center — B.A., St. Johns University; M.A., University of North Dakota; Ed.D., Auburn University (G) (DR)

Marcia Kuechenmeister, (1985) Interim, Re-Entry Student Services — A.A.S., University of New York; B.A., M.A., University of Northern Colorado

Frank J. Lucero, (1985) Hispanic Cultural Center — B.A., M.A., University of Northern Colorado; Ph.D., Colorado State University

Michael E. Maestas, (1985) Student Financial Resources — B.A., M.A., Adams State College

Philip Mullen, (1984) Summer/Evening Division — B.A., Central Connecticut; M.A., Northern Illinois University

Donald L. Myers, (1966) Computer and Data Processing Center — B.A., Washburn University; M.A., Kansas State University

Trudy Nocella, (1988) Career Services — B.S., Eastern Michigan University; M.Ed., Wayne State University; Ph.D., University of Denver

Doug C. Otte, (1988) Accounting Services — B.S., Colorado State University

Ralph K. Phillips, (1988) Annual Funds — B.S., Ohio University; M.Ed., Colorado State University

Ray Romero, (1974) Center for Human Enrichment — B.A., M.A., University of Northern Colorado

Jerome Schmitz, (1988) Facilities and Operations — B.A., Colorado State University; M.A., University of Colorado

Lynn Settje, (1988) Student Activities — B.A., Midland Lutheran College; M.A., Ph.D., University of Northern Colorado

Barbara Slobojan, (1980) Planned Giving — A.A., University of Delaware

David W. Smart, (1969) Counseling Center — B.A., Brigham Young University; M.A., Ph.D., University of Utah

Michael Spellman, (1987) Development and Executive Director of the UNC Foundation, Inc. — B.A., University of Wisconsin-Whitewater; M.A., University of Northern Colorado

Bryan G. Stuart, (1988) Alumni Relations — B.M., North Texas State University; M.M., Southern Methodist University

Douglas L. Stutler, (1964) Personnel — B.A., M.A., University of Northern Colorado; Ph.D., Oregon State University

Gerald E. Tanner, (1959) Auxiliary Services-Marketing and University Center — B.A., M.A., Ph.D., University of Northern Colorado (G)

Charles S. Wilson, (1977) Housing and Food Service — B.S., Michigan State University

Evelyn A. Yingling, (1981) RSVP

Leon Zaborowski, (1988) Statewide Programs — B.S., University of Wisconsin; Ph.D., University of Idaho

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

Wallace Aas, (1959) Professor of Physics — B.S., Moorhead State Teachers College; M.A., University of Northern Colorado

William T. Agan, (1964) Associate Professor of English — B.A., M.A., San Francisco State College

Mark B. Alcorn, (1986) Assistant Professor of Psychology — B.A., Occidental College; M.A., Ph.D., University of S. California (G)

David L. Anderson, (1976) Associate Professor of Journalism and Mass Communications — B.J., University of Missouri; M.A., University of Massachusetts

Carol R. R. Andreas, (1988) Associate Professor of Sociology — B.A., Bethel College; M.A., University of Minnesota; Ph.D., Wayne State University

James K. Bachmann, (1984) Assistant Professor of Hispanic Studies — B.A., Ph.D., Georgetown University (G)

William A. Barnard, (1972) Associate Professor of Psychology — B.A., M.A., Western Washington State College; Ph.D., Colorado State University (G)

Richard A. Blanke, (1978) Associate Professor of Philosophy — M.Ph., University of New York; M.A., City University of New York; Ph.D., University of New York (G)

William L. Blubaugh, (1987) Assistant Professor of Mathematics — B.S., M.Ed., Kent State University; Ph.D., University of Colorado (G)

John T. Bookman, (1966) Professor of Political Science — B.A., Ph.D., University of Cincinnati (G)

William W. Bosch, (1970) Professor of Mathematics and Applied Statistics — B.S., M.S., North Dakota State University; Ph.D., University of Nebraska (G) (DR)

John M. Brand, III, (1969) Professor of English — B.A., Austin College; M.Div., Austin Presbyterian Seminary; Ph.D., Texas Christian University (G)

Wanda Brewer, (1962) Professor of English — B.F.A., University of Denver; M.A., Ed.D., University of Northern Colorado (G)

John C. Bromley, (1986) Assistant Professor of Journalism — B.A., M.A., University of Colorado

Susan P. Bromley, (1985) Assistant Professor of Psychology — B.A., Mt. Holyoke College; M.A., Case Western Reserve University; Psy.D., University of Denver (G)

Bill R. Brown, (1980) Professor of Psychology — B.A., M.S., North Texas State University; Ph.D., Texas Christian University (G) (DR)

Glenda J. Brown, (1963) Professor of French — B.A., University of Oregon; M.A., Ph.D., University of Illinois (G)

Warren R. Buss, (1967) Professor of Botany — B.S., Brigham Young University; Ph.D., Iowa State University (G) (DR)

Benjamin F. Byerly, (1963) Professor of History — B.S., Kansas State University; M.A., Ph.D., University of Illinois (G)

David Caldwell, (1983) Associate Professor of German — B.A., University of Texas; M.A., Ph.D., Ohio State University (G)

Ronald S. Camp, (1968) Associate Professor of Telecommunications — B.A., M.A., University of Missouri

Christopher Carr, (1984) Assistant Professor of Political Science — B.A., University of Lancaster; Ph.D., University of London (G)

Timothy D. Cavanagh, (1965) Professor of Mathematics and Applied Statistics — B.A., M.A., Sacramento State College; Ph.D., Ohio State University (G)

J. Way Chen, (1988) Associate Professor of Mathematics and Applied Statistics — M.A., Eastern Michigan University; M.S., Ph.D., Texas A&M University

Marshall S. Clough, (1975) Associate Professor of History — B.A., Columbia University; M.A., Ph.D., Stanford University (G)

L. Glenn Cobb, (1969) Professor of Meteorology — B.A., Louisiana State University; M.S., Ph.D., Texas A&M University (G)

David Cole, (1975) Professor of Geography — B.A., University of Texas, Austin; M.A., Syracuse University; Ph.D., University of Colorado (G) (DR)

Charles O. Collins, (1970) Associate Professor of Geography — B.A., M.A., University of Northern Colorado; Ph.D., University of Kansas (G) (DR)

Roberto H. Cordova, (1977) Associate Professor of Hispanic Studies — B.A., Western State College; M.A., Ph.D., University of Colorado (G)

Alfred E. Cornebise, (1967) Professor of History — B.A., Wayland College; M.A., Texas Tech University; Ph.D., University of North Carolina (G) (DR)

Christopher S. Cotter, (1986) Assistant Professor of Mathematics and Applied Statistics — B.A., University of Chicago; M.A., Ph.D., University of California-Santa Cruz

Richard J. Crawford, (1962) Professor of Speech Communication — B.A., M.A., Southern Illinois University; Ph.D., University of Oklahoma (G) (DR)

Robert C. Dickeson, (1981) Professor of Political Science — B.A., M.A., Ph.D., University of Missouri (G)

John L. Dietz, (1967) Professor of Geography — B.S., University of Nebraska; M.A., University of Northern Colorado; Ph.D., Syracuse University (G) (DR)

Richard D. Dietz, (1969) Professor of Astronomy — B.S., California Institute of Technology; Ph.D., University of Colorado (G)

John C. Domino, (1987) Assistant Professor of Political Science — B.A., Florida Atlantic University; M.A., Eastern Kentucky; Ph.D., Miami University

James F. Doyle, (1970) Professor of English — B.A., University of Wisconsin; M.F.A., University of Iowa

- Ronald K. Edgerton**, (1973) Professor of History — B.A., DePauw University; M.A., University of Massachusetts; Ph.D., University of Michigan (G)(DR)
- Donald D. Elliott**, (1966) Professor of Mathematics and Applied Statistics — B.S. in Chem., B.S. in Bus., M.A., Ph.D., University of Colorado (G)
- Kathleen Y. Ensz**, (1970) Professor of French — B.A., Pomona College; M.A., University of California, Berkeley; Ph.D., Stanford University (G)(DR)
- Willard L. Fadner**, (1972) Professor of Physics — B.S., Purdue University; M.S., University of Wisconsin; Ph.D., University of Colorado (G)
- George E. Fay**, (1966) Professor of Anthropology — B.A., University of Missouri; M.A., University of Michigan; Ph.D., Inter-American University
- Clark L. Fields**, (1964) Professor of Chemistry — B.A., Pasadena College; M.S., Ph.D., State University of Iowa
- James P. Fitzgerald**, (1974) Professor of Biological Sciences — B.S., University of Connecticut; Ph.D., Colorado State University (G)(DR)
- John W. Fox**, (1977) Associate Professor of Sociology — B.S., Michigan State University; M.A., Ph.D., Western Michigan University (G)(DR)
- John K. Gapter**, (1963) Professor of Botany — B.S., M.S., Ph.D., Colorado State University (G)(DR)
- April L. Gardner**, (1985) Assistant Professor of Biology — B.S., Centre College of Kentucky; M.S., Ph.D., Purdue University (G)
- Ann J. Garrison**, (1966) Assistant Professor of Economics — B.A., M.A., University of Northern Colorado
- Hermon H. George**, (1985) Associate Professor of Black Studies — B.A., Wilkes College; M.A., Middlebury College; Ph.D., University of California
- Ester Gimbernat de Gonzalez**, (1983) Associate Professor of Hispanic Studies — B.A., Profesorado Sarmiento; M.A., Ph.D., Johns Hopkins University (G)(DR)
- Patricia E. Graham**, (1985) Assistant Professor of Economics — B.A., University of Denver; M.S., Ph.D., Colorado State University
- John W. Green**, (1985) Associate Professor of Economics — B.V.S., South Dakota State University; M.S., Oklahoma State University; M.S., Ph.D., University of Pennsylvania (G)
- Jay K. Hackett**, (1973) Professor of Earth Sciences — B.S., University of Nebraska; M.N.S., Arizona State University; Ed.D., University of Northern Colorado (G)(DR)
- Robert G. Hamerly**, (1960) Professor of Physics — B.S., Western Illinois State College; M.S., University of Illinois; Ph.D., Colorado State University (G)
- William E. Harmon**, (1972) Professor of Botany — B.A., M.A., Ph.D., University of Missouri (G)(DR)
- John W. Harrison**, (1960) Professor of English — B.S., California Institute of Technology; M.A., University of Denver; Ph.D., University of Colorado (G)(DR)
- Henry W. Heikkinen**, (1986) Professor of Chemistry — B.E., Yale University; M.A., Columbia University; Ph.D., University of Maryland (G)(DR)
- Margaret E. Heimbroom**, (1974) Professor of Biological Sciences — B.S., Muskingum College; M.A., Lehigh University; M.S., University of Wisconsin; Ph.D., Colorado State University (G)(DR)
- Robert L. Heiny**, (1968) Professor of Mathematics and Applied Statistics — B.S., Colorado College; M.S., Ph.D., Colorado State University (G)(DR)
- Robert A. Hess**, (1971) Assistant Professor of Mass Communications — B.A., Southern Methodist University; M.A., West Texas State University
- Pamela Hewitt**, (1982) Associate Professor of Sociology — B.A., M.A., Ph.D., University of New Hampshire (G)(DR)
- Michael J. Higgins**, (1973) Professor of Anthropology — B.A., University of Northern Colorado; M.A., Ph.D., University of Illinois
- Paul F. Hodapp**, (1972) Associate Professor of Philosophy — B.A., Western Michigan University; Ph.D., Washington University; J.D., University of Denver (G)
- Kenneth D. Hopkins**, (1969) Associate Professor of Geology — B.A., University of Minnesota; M.S., Ph.D., University of Washington
- Samuel R. Houston**, (1968) Professor of Mathematics and Applied Statistics — B.A., University of California at Los Angeles; M.A., California State University at Los Angeles; M.S., University of Oregon; Ph.D., University of Northern Colorado; Postdoctoral Certificate, Yale University (G)(DR)
- William H. Hoyt**, (1981) Associate Professor of Oceanography — B.A., Middlebury College; M.S., State University of New York; Ph.D., University of Delaware (G)(DR)
- William J. Hudspeth**, (1985) Associate Professor of Psychology — B.A., M.A., San Jose State University; Ph.D., Claremont Graduate School (G)(DR)
- Richard M. Hyslop**, (1984) Associate Professor of Chemistry — B.S., Indiana State University; Ph.D., University of Texas (G)(DR)
- Charles H. Ingold**, (1983) Assistant Professor of Journalism and Mass Communications — B.A., University of Akron; M.A., Colorado State University; Ph.D., University of Colorado (G)
- Peter Isaacson**, (1983) Assistant Professor of Mathematics and Applied Statistics — B.A., Concordia College; M.A., University of Northern Colorado; M.S., Ph.D., Colorado State University
- Marlynn R. James**, (1966) Professor of Chemistry — B.S., M.S., Brigham Young University; Ph.D., University of Utah (G)(DR)
- Karen Jennison**, (1972) Associate Professor of Sociology — B.A., University of Kansas; M.A., Washington University; Ph.D., Washington State University (G)
- Anthonia C. Kalu**, (1989) Assistant Professor of Black Studies — B.A., M.A., Ph.D., University of Wisconsin
- Zahi S. Kamal**, (1970) Associate Professor of Sociology — B.S., M.S., Colorado State University; Ph.D., Washington State University (G)
- Idahlynn Karre**, (1970) Associate Professor of Speech Communication — B.A., M.A., University of Northern Colorado; Ph.D., University of Colorado (G)
- Edward A. Kearns**, (1966) Associate Professor of English — B.A., M.A., University of Arizona
- Kevin C. Kearns**, (1966) Professor of Geography — B.S., Washington University; M.A., Ph.D., St. Louis University (G)(DR)
- Frank E. Keppeler**, (1967) Associate Professor of German — B.S., University of Illinois; B.A., M.A., University of Nebraska (G)
- Rita B. Kiefer**, (1970) Professor of English — B.A., Notre Dame College; M.A., University of Notre Dame
- Alexander W. Knott**, (1968) Associate Professor of History — B.A., M.A., Ph.D., University of Colorado (G)
- Roger A. Kovar**, (1970) Professor of Chemistry — B.A., Doane College; Ph.D., University of Wyoming (G)(DR)
- Jessica Kozloff**, (1976) Assistant Professor of Political Science — B.S., M.A., University of Nevada; Ph.D., Colorado State University (G)
- Joyce Lackie**, (1969) Associate Professor of English — B.A., Illinois State University; M.A., University of Illinois; Ph.D., University of Alabama
- Robert W. Larson**, (1960) Professor of History — B.A., M.A., University of Denver; Ph.D., University of New Mexico (G)(DR)
- Carlos Leal**, (1970) Associate Professor of Hispanic Studies — B.A., Ed.S., University of Northern Colorado
- Paul L. Lehrer**, (1966) Professor of Geography — B.S., University of Cincinnati; M.A., Ohio State University; Ph.D., University of Nebraska (G)
- Steven C. Leth**, (1988) Assistant Professor of Mathematics — B.A., University of Colorado; M.S., Stanford University; Ph.D., University of Colorado
- Ivo E. Lindauer**, (1960) Professor of Botany — B.S., Colorado State University; M.A., University of Northern Colorado; Ph.D., Colorado State University (G)(DR)
- Marie L. Livingston**, (1985) Associate Professor of Economics — B.S., Utah State University; M.S., University of Arizona; Ph.D., Colorado State University (G)
- John E. Loftis, III**, (1970) Professor of English — B.A., University of the South; M.A., Ph.D., Emory University (G)(DR)
- Maria Lopez**, (1972) Professor of Hispanic Studies — B.A., University of Northern Colorado; M.A., Ph.D., University of Iowa
- Jeanne L. Luere**, (1963) Associate Professor of English — B.A., B.S., M.A., Ohio State University
- Kathleen E. B. Manley**, (1969) Associate Professor of English — B.A., Reed College; M.A., University of New Mexico; Ph.D., Indiana University (G)
- James Marshall**, (1973) Associate Professor of Sociology — B.A., University of Southern Colorado; M.A., University of Northern Colorado; Ph.D., University of Colorado (G)
- Steve J. Mazurana**, (1969) Associate Professor of Political Science — B.A., University of Miami; M.A., Indiana University (G)

- Patrick J. McCarthy**, (1988) Assistant Professor of Journalism and Mass Communications — B.A., Idaho State University; M.A., Washington State University; Ph.D., Bowling Green State University
- Charles R. Mc Nerney**, (1969) Professor of Mathematics and Applied Statistics — B.A., M.A., University of Northern Colorado; Ph.D., Ohio State University (G) (DR)
- Marcus K. Meilahn**, (1968) Professor of Chemistry — B.S., Lakeland College; Ph.D., Arizona State University (G) (DR)
- Wayne W. Melanson**, (1975) Associate Professor of Journalism and Mass Communications — B.A., Adams State College; Ed.S., University of Northern Colorado
- Charles A. Meyer**, (1966) Associate Professor of English — B.A., Wagner College; M.A., University of Arizona (G)
- Daniel J. Moran**, (1988) Assistant Professor of History — B.A., Yale University; Ph.D., Stanford University
- Grant L. Morris**, (1972) Professor of Psychology — B.A., University of South Florida; M.S., Ph.D., Washington State University (G)
- David Musick**, (1980) Associate Professor of Sociology — B.A., California State University, San Bernadino; M.A., Ph.D., University of California, Riverside (G) (DR)
- Doris E. Myers**, (1967) Professor of English — B.S.E., Arkansas State Teachers College; M.A., Ohio University; Ph.D., University of Nebraska (G)
- William D. Nesse**, (1977) Associate Professor of Geology — B.S., Washington State University; Ph.D., University of Colorado (G)
- Daniel F. O'Connor**, (1974) Assistant Professor of Sociology — B.A., Northern State College; M.A., Creighton University; Ph.D., Oklahoma State University (G) (DR)
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- Richard K. Ormrod**, (1976) Professor of Geography — B.S., M.A., Arizona State University; Ph.D., Pennsylvania State University (G) (DR)
- E. Edward Peebles**, (1973) Professor of Biological Sciences — B.S., University of Florida; Ph.D., University of Texas (G) (DR)
- Norman L. Peercy**, (1969) Professor of English — B.S.E., M.A., University of Northern Colorado; M.Ph., Ph.D., University of Kansas (G)
- Ronald K. Plakke**, (1966) Professor of Zoology — B.A., University of Northern Colorado; Ph.D., University of Montana (G) (DR)
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- Charles S. L. Poston**, (1971) Professor of Psychology — B.A., Lynchburg College; M.S., Auburn University; Ph.D., Washington State University (G)
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- Donald K. Adams**, (1971) Professor of Educational Field Experiences — B.S., Colorado State University; M.A., Ed.D., University of Northern Colorado
- Clifford D. Baker**, (1974) Professor of Special Education — B.S., Central Missouri State University; M.S., St. Cloud State University; Ed.D., University of Northern Colorado (G)(DR)
- Julia V. Batten**, (1988) Assistant Professor of Special Education — B.A., Salem College; M.A., Appalachian State University; Ph.D., University of Georgia
- George T. Betts**, (1979) Assistant Professor of Special Education — B.S., Phillips University; M.A., Ed.D., University of Northern Colorado (G)(DR)
- Margaret T. Blake**, (1968) Professor of Counseling Psychology — B.S., University of Oklahoma; M.S., Ph.D., Iowa State University (G)(DR)
- David Bolocofsky**, (1975) Associate Professor of School Psychology — B.A., Clark University; M.S., Ph.D., Nova University (G)(DR)
- James K. Bowen**, (1966) Professor of College Student Personnel Administration — B.S., M.S. in Ed., Kansas State Teachers College; Ed.D., University of Wyoming (G)
- Bruce W. Broderius**, (1966) Professor of Elementary Education and Reading — B.S., St. Cloud State University; M.A., George Washington University; Ed.D., University of Northern Colorado (G)(DR)

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- Kyle R. Carter**, (1976) Professor of Educational Psychology — B.A., Mercer University; M.A., Ph.D., University of Georgia (G)(DR)
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- Mark W. Clark**, (1986) Professor of Educational Research and Evaluation — B.A., M.A., University of California, Berkeley; Ph.D., Stanford University (G)
- Kathryn F. Cochran**, (1984) Assistant Professor of Educational Psychology — B.S., M.A., Northern Arizona University; Ph.D., Purdue University (G)(DR)
- Mark A. Constas**, (1988) Assistant Professor of Educational Psychology — B.S., Northeastern University; M.A., Ph.D., Cornell University
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- Judith S. Gilbert**, (1976) Associate Professor of Special Education — B.A., University of Rhode Island; M.A., Ed.D., University of Denver (G)
- Michael J. Gimmestad**, (1977) Professor of Counseling Psychology — B.A., St. Olaf College; M.S., Indiana University; Ph.D., University of Minnesota (G)(DR)
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- Lawrence W. Goslin**, (1985) Assistant Professor of Educational Administration — B.A., B.S., M.Ed., Ed.S., Ed.D., University of Missouri
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- William D. Popejoy**, Professor Emeritus of Mathematics and Applied Statistics — B.S., M.A., Ed.D. Appointed 1959; Emeritus since 1988
- Alberta Eloise Reitze**, Associate Professor Emeritus of Education — B.A., M.A. Appointed 1950; Emeritus since 1966
- Arthur R. Reynolds**, Professor Emeritus of History — B.A., M.A., Ph.D. Appointed 1949; Emeritus since 1980; Dean Emeritus of the Graduate School, Appointed 1965; Emeritus since 1980
- Mary R. Rhoads**, Professor Emeritus of Music — B.S., M.M., Ph.D. Appointed 1971; Emeritus since 1984
- Paul W. Richard**, Professor Emeritus of Biology in the Laboratory School — B.A., M.A. Appointed in 1967; Emeritus since 1984
- Robert C. Richardson**, Professor Emeritus of Educational Field Experiences — B.A., M.A., Ph.D. Appointed 1967; Emeritus since 1988
- Winnifred S. Richardson**, Associate Professor Emeritus of Library Science — B.A., M.A. Appointed 1960; Emeritus since 1973
- Emmett Ritter**, Professor Emeritus of Business Administration — B.S., M.Ed., Ed.D. Appointed 1966; Emeritus since 1986
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- Wendell L. Roy**, Professor Emeritus of Industrial Arts — B.S., M.Ed., Ed.D. Appointed 1970; Emeritus since 1983
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- George F. Sanderson**, Professor Emeritus of Education — B.A., M.A. Appointed 1948; Emeritus since 1975
- Gordon H. Sawatzky**, Associate Professor Emeritus of Nursing — B.A., M.N., M.S. Appointed 1965; Emeritus since 1985
- Anne W. Schenkman**, Professor Emeritus of Counseling Psychology — B.A., M.A., Ed.D. Appointed 1967; Emeritus since 1988
- Walter A. Schenkman**, Professor Emeritus of Music — B.A., M.M., D.M. Appointed 1956; Emeritus since 1984
- John Schmid**, Professor Emeritus of Mathematics and Applied Statistics — B.S., M.S., Ph.D. Appointed 1966; Emeritus since 1984
- Donald L. Schmidt**, Professor Emeritus of Mathematics and Applied Statistics — A.B., M.S., Ph.D. Appointed 1966; Emeritus since 1988
- Claude M. Schmitz**, Professor Emeritus of Music — B.A., M.A. Appointed 1953; Emeritus since 1983
- Robert O. Schulze**, Professor Emeritus of Sociology — B.A., M.A., Ph.D. Appointed 1972; Emeritus since 1987
- Herbert C. Schumacher**, Professor Emeritus of Visual Arts — B.F.A., M.F.A., Ed.D. Appointed 1963; Emeritus since 1988
- Daniel A. Seager**, Associate Professor Emeritus of Library Science — B.A., M.A., Appointed 1956; Emeritus since 1984

- Donald E. Seager**, Professor Emeritus of Educational Media — B.E., M.A., Ed.D. Appointed 1966; Emeritus since 1983
- Jack Shaw**, Professor Emeritus of College Student Personnel Administration — B.A., M.Ed., Ph.D. Appointed 1950; Emeritus since 1973
- J. Max Shirley**, Professor Emeritus of Recreation — B.S., M.A., Ed.D. Appointed 1962; Emeritus since 1984
- Joseph L. Shoemaker**, Professor Emeritus of Science — B.A., M.A., Ed.D. Appointed 1952; Emeritus since 1983
- Robert O. Singer**, Professor Emeritus of Education — B.A., M.A., Ed.D. Appointed 1966; Emeritus since 1985
- Robert S. Sloat**, Professor Emeritus of Human Rehabilitative Services — B.A., M.S., Ph.D. Appointed 1977; Emeritus since 1983
- Maynard N. Stamper**, Professor Emeritus of Biological Sciences — B.S., M.A., Ph.D. Appointed 1954; Emeritus since 1974
- Wendell R. Starr**, Professor Emeritus of English — B.A., M.A., Ph.D. Appointed 1958; Emeritus since 1980
- Doris C. Steffy**, Professor Emeritus of Physical Education — B.A., M.A. Appointed 1950; Emeritus since 1981
- Robert B. Stein**, Professor Emeritus of Sociology — B.A., M.A., Ph.D. Appointed 1975; Emeritus since 1985
- Connie K. Stelljes**, Professor Emeritus of Spanish in the Laboratory School — B.S., M.A., Ph.D. Appointed 1967; Emeritus since 1984
- Walter H. Stewart**, Professor Emeritus of Journalism and Mass Communications — B.A., M.A., Ph.D. Appointed 1968; Emeritus since 1984
- James A. Stoffler**, Professor Emeritus of Education — B.S., M.A., Ed.D. Appointed 1961; Emeritus since 1984
- George Tate**, Professor Emeritus of Counseling Psychology — B.A., M.A., M.Div., Th.D. Appointed 1974; Emeritus since 1988
- JoAnn Taylor**, Professor Emeritus of Home Economics and Women's Studies — B.S., M.A., Ed.D. Appointed 1965; Emeritus since 1983
- Bert O. Thomas**, Professor Emeritus of Zoology — B.S., M.A., Ph.D. Appointed 1959; Emeritus since 1986
- Oscar W. Tollefson**, Professor Emeritus of Geology — B.S., M.A., Ph.D. Appointed 1956; Emeritus since 1969
- Sylvester Roy Toussaint**, Professor Emeritus of Speech — B.A., M.A., Ph.D. Appointed 1938; Emeritus since 1967
- Orvel L. Trainer**, Professor Emeritus of Economics — B.A., M.A., Ph.D. Appointed 1960; Emeritus since 1985
- Leslie W. Trowbridge**, Professor Emeritus of Science Education — B.S., M.S., Ph.D. Appointed 1962; Emeritus since 1983
- R. Elaine Uhrig**, Associate Professor Emeritus of Special Education — B.A., M.A., Ed.D. Appointed 1970; Emeritus since 1988
- Nancy Van Anne**, Professor Emeritus of Physical Education — A.B., M.A., Ph.D. Appointed 1955; Emeritus since 1985
- Wayman E. Walker**, Professor Emeritus of Music — B.M.E., M.M. Appointed 1951; Emeritus since 1978
- Doris O. Walters**, Associate Professor Emeritus of Home Economics — B.S., M.Ed. Appointed 1970; Emeritus since 1979
- Thomas E. Warner**, Professor Emeritus of Educational Field Experiences — B.S., M.Ed., Ph.D. Appointed 1970; Emeritus since 1984
- William H. Weltner**, Associate Professor Emeritus of Education — B.S., M.A., Ed.D. Appointed 1968; Emeritus since 1983
- John Willcoxon**, Professor Emeritus of Theatre Arts — A.B., M.A., Ph.D. Appointed 1965; Emeritus since 1986
- Gary G. Willoughby**, Associate Professor Emeritus of Sociology — B.A., M.A. Appointed 1963; Emeritus since 1988
- Laura O. Williams**, Assistant Professor Emeritus of Education — B.A., M.A. Appointed 1968; Emeritus since 1971
- A.M. Winchester**, Professor Emeritus of Biology — B.A., M.A., Ph.D. Appointed 1962; Emeritus since 1973
- Elisabeth P. Wirick**, Associate Professor Emeritus of Food, Nutrition and Dietetics — B.S., M.A. Appointed 1971; Emeritus since 1988
- Marian G. Witwer**, Associate Professor Emeritus of English — B.A., M.A. Appointed 1965; Emeritus since 1979
- Dale Woerner**, Professor Emeritus of Chemistry — B.S., M.S., Ph.D. Appointed 1958; Emeritus since 1986
- Welby B. Wolfe**, Professor Emeritus of Drama — B.A., M.A., Ed.D. Appointed 1946; Emeritus since 1973
- Ernest J. Woods**, Professor Emeritus of Mathematics Education — B.A., M.A. Appointed 1956; Emeritus since 1982
- Thurman Wright**, Professor Emeritus of Physical Education — A.B., M.A., D.P.E. Appointed 1965; Emeritus since 1986
- Leslie Day Zeleny**, Professor Emeritus — B.S., M.A., Ph.D. Appointed 1946; Emeritus since 1963

Index — General

A	
Academic Advising.....	9
Academic Advising Center.....	9
Academic Appeals Board.....	17
Academic Freedom, Rights & Responsibilities.....	16
Academic Progress Standards, Financial Aid.....	47
Academic Semester System.....	15
Academic Standards, Graduate.....	35
Academic Standing, Undergraduate.....	17
Accreditation & Affiliation.....	7
Admission to Candidacy, Doctoral Degree.....	42
Admission, Conditional, Graduate.....	33
Admission, Denied, Graduate.....	33
Admission, International Student.....	34
Admission, Professional Teacher Education.....	22
Admission, Provisional, Graduate.....	33
Admission, Regular, Graduate.....	33
Admission, Restrictions, Graduate.....	33
Admission, Undergraduate (Freshman, Transfer).....	27
Admissions Philosophy, Undergraduate.....	27
Admissions Standards, Graduate.....	33
Advisors, Graduate Program.....	35
Aid, Financial.....	47
AP Credit.....	19
Appeals Board, Academic.....	17
Application, Financial Aid.....	47
Assessment, Academic Programs.....	24
Athletics.....	11
Attendance.....	15
Awards, Financial Aid.....	47
B	
Baccalaureate Holders from Non-Accredited Institutions, Admission.....	34
Bulletin Requirements, Graduation.....	19
C	
Calendar.....	iii
Cancellation of Class Fee.....	46
Career Services, Career Development & Testing Center.....	9
Career Services, Placement.....	9
Center for Human Enrichment.....	9
Certification Program, Graduate, Application.....	34
Certification, Professional Teacher Education.....	23
CEU/Non-Credit Courses.....	8
Challenge Examination, General Education.....	19
Change of Major, Graduate.....	35
Class Status.....	16
Classification, In-State & Out-of-State.....	45
Committee Appointments, Doctoral Degree.....	41
Competency in English Usage & Speech Skills, Graduate.....	35
Comprehensive Examination/Approved Equivalents, Master's Degree.....	38
Comprehensive Examination, Specialist's Degree.....	39
Comprehensive Examination, Oral, Doctoral Degree.....	42
Comprehensive Examination, Written, Doctoral Degree.....	41
Comprehensive Examination, Written, Removal from Student Files.....	37
Computing Grade Averages.....	15
Computing Services.....	8
Concurrent Degrees.....	18
Continuation in a Doctoral Degree Program.....	41
Continuation in a Master's Program.....	38
Continuation in a Specialist Program.....	39
Continuous Registration, Doctoral Degree.....	42
Correspondence Credit.....	19
Costs.....	45
Costs & Financial Aid.....	47
Counseling Center, University.....	9
Course Credit.....	15
Course Descriptions.....	242
Course Designations.....	15
Course Load, Undergraduate.....	16
Course Load Policy, Graduate.....	35
Course Numbering, Graduate.....	35
Course Numbering, Undergraduate.....	15
Course Prefixes.....	15
Courses Counting For Higher Degree.....	18
Courses, Off-Campus.....	8
Credit Limitations, Graduate Degree.....	35
Credit Requirements, Doctoral Degree.....	40
Credit Requirements, Master's Degree.....	37
Credit Requirements, Specialist's Degree.....	39
Credit by Examination.....	19
D	
Dean of Students.....	9
Dean's Honor Roll.....	24
Dean's List of Distinction.....	24
Deferral of Payment Fee.....	46
Degree Credit Limitations, Graduate.....	35
Dining.....	9
Directed Studies, Graduate.....	36
Directed Studies, Undergraduate.....	19
Disabled Students, Resources for.....	9
Dissertation Defense, Doctoral Degree.....	43
Dissertation Filing, Doctoral Degree.....	43
Dissertation, Objection to Doctoral.....	43
Dissertation Proposal & the Dissertation, Doctoral Degree.....	42
Division of Statewide Programs.....	8
Doctoral Degree Admission.....	42
Doctoral Degree Program Requirements.....	40
Doctoral Hooding.....	43
Double Major, Master's Degree.....	37
Double Major, Undergraduate.....	18
Double Numbering, Graduate.....	35
Drop from Classes Fee.....	46
Dual Doctoral Guidelines, Doctoral Degree.....	40
E	
Educational Loans.....	47
Elementary Education Certification Requirements.....	22
Eligibility for Enrollment, Graduate.....	35
Emphasis Area, Definition.....	20
Employment, Student.....	47
English Essay Exam.....	20
Enrichment Course Work, Graduate.....	36
Evening/Summer Division.....	8
Excellence, Academic, Recognition of.....	24
Exceptions, General Education.....	22
Exit Testing, Professional Teacher Education.....	24
External Degree Programs.....	9
External Degree Programs, Master's Degree.....	38
F	
Family Educational Rights & Privacy Act.....	16
Fee Changes.....	45
Fees, General.....	45
Fees, Other.....	46
Final Examinations.....	18
Financial Aid Academic Progress Standards.....	47
Financial Aid Application.....	47
Financial Aid Award.....	47
Financial Aid Refund Policy.....	47
Financial Aid Repayment Policy.....	47
Financial Aid, Costs and.....	47
Financial Resources, Student.....	47
Food Service, Housing and.....	9
Foreign Student Admission.....	28
Foreign Student Center.....	11
Foreign Student, Graduate, Admission.....	34
Fraternalities.....	10
Freshman Admission.....	27
Freshman Application Procedures.....	27
Freshman On-Campus Living Requirement.....	27
Full-time Status.....	16

G	
General Education Challenge Examination	19
General Education Program	20
General Education, Life of the Mind	22
Grade Corrections	18
Grade Point Average, Graduate	36
Grade Submissions & Corrections	36
Grade System	15
Grades, Computing Averages	15
Grades, Graduate	36
Graduate Academic Standards	35
Graduate Admission Classifications	33
Graduate Admission Procedures	32
Graduate Admission Restrictions, General	33
Graduate Council, The	31
Graduate Dean's Citation, The	24
Graduate Degree Program, Change in	35
Graduate Degrees, Nature & Purpose	31
Graduate Education	31
Graduate Faculty, The	31
Graduate Houses for Women	10
Graduate Interdisciplinary Degree Program, Admission	34
Graduate Internship Program	32
Graduate Program Advisors	35
Graduate Programs & Degrees, by College	31
Graduate School, The	31
Graduate Special Admission	34
Graduate Work Toward Next Higher Degree	35
Graduation Application	19
Graduation Procedures, Graduate	37
Graduation Requirements, Graduate	37
Graduation Requirements	19
Graduation with Honors	24
Grants	47

H	
Health Center, Student	9
Hispanic Cultural Center	11
Honors Program	24
Hooding, Doctoral	43
Housing & Food Service	9
Housing, Costs	45
Housing, Off-Campus	10

I	
Immunization Regulation	28
Independent Studies	9
In-State & Out-of-State Classification	45
Insurance	28
Interdisciplinary Programs, Graduate	32
International Student Admission	98
International Student Center	11
International Students, Graduate, Admission	34
Internship, Graduate Program	32
Introduction	6

J	
James A. Michener Library	8
Job Placement Services	9

L	
Laboratory School	8
Laboratory School Library	8
Late Enrollment	17
Late Payment Fee	46
Library Services	8
Library, James A. Michener	8
Library, Laboratory School	8
Library, Music	8
Life of the Mind Project	22
Loans, Educational	47
Location	6

M	
Major & Minor Requirements	20
Major, Definition	20
Marcus Garvey Cultural Center	10
Master's Degree Admission	33
Master's Degree Program Requirements	37
Master's Thesis/Creative Project	38
Meal Plans, Optional	10
Medical Examination	28
Minimum Residence	19
Minor, Definition	20
Mission, Goals, Values	6
Music Library	8

N	
New Student Orientation	28
Non-Accredited Institutions, Baccalaureate Holders from, Admission	34
Non-Baccalaureate Master's Degree Program, Admission	34
Non-Credit Courses, CEU	8

O	
Off-Campus Courses	8
Off-Campus Housing	10
Off-Campus Programs, Fees	45
On-Campus Living Requirement, Freshman	27
On-Campus Dining	10
Optional Meal Plans	10
Organizations & Activities	10
Orientation, New Student (Undergraduate)	28
Other Academic Opportunities	19
Out-of-State Classification	45
Out-of-State Tuition	45

P	
Parking Regulation	28
Part-time Status	16
Paying Student Account	46
Payment, Late, Fee	46
Petition Process, Graduate	37
Placement, Career Services	9
Plan of Study, Doctoral Degree	40
Plan of Study, Master's Degree	37
Plan of Study, Specialist's Degree	38
Post-Doctoral Programs	32
Practicum, Specialist's Degree	40
Prefixes, Courses	244
Previous Credit Earned	19
Privacy Act, Family Educational Rights and	16
Probation, Academic	17
Procedures	17
Professional Teacher Education	22
Proficiency Examinations	19
Program Advisors, Graduate	35
Public Safety, Department of	11

R	
Rates	45
Re-Entry Students	9
Re-Registration of Classes Fee	46
Readmission After Academic Suspension	17
Readmission Subsequent to Program Termination, Graduate	36
Recognition of Academic Excellence	24
Registrar & Records Office	9
Registration Procedures	17
Repayment Policy, Financial Aid	47
Requirements for All Students	28
Research Tools, Doctoral Degree	41
Residence, Minimum	19
Residency, Doctoral Degree	40
Residency, Master's Degree	37
Residency, Specialist's Degree	39
Room & Board	45
Room & Board Rates	45

S	
Schedule Changes.....	17
Second Baccalaureate Degree.....	18
Semester System, Academic.....	15
Services & Resources.....	8
Social Organizations & Activities.....	10
Sororities.....	10
Specialist Degree Admission.....	33
Specialist Degree Program Requirements.....	38
Sports.....	11
Statewide Programs, Division of.....	8
Statewide Programs, Division of, Fees.....	45
Student Activities.....	10
Student Activities, Organizations.....	10
Student Centers.....	10
Student Employment.....	47
Student Family Apartments.....	10
Student Financial Resources Office.....	9
Student Financial Resources.....	47
Student Health Center.....	9
Student Life.....	9
Student Organizations.....	10
Student Services.....	9
Student Teaching, See Professional Teacher Education.....	22
Summer Session.....	8
Suspension, Academic.....	17
T	
Termination of Degree Program, Graduate.....	36
Testing Center, Career Development &.....	9
Theses & Dissertations.....	42
Time Limit, Doctoral Degree.....	40

Time Limit, Master's Degree.....	38
Time Limit, Specialist's Degree.....	39
TOEFL, International Student Requirement.....	35
Transcripts, UNC.....	18
Transcripts, Official.....	18
Transfer Admission.....	27
Transfer Application Procedures.....	27
Transfer Credit.....	27
Transfer Bulletin.....	28
Transfer Guide.....	28
Transfer of Credit, Doctoral Degree.....	41
Transfer of Credit, Master's Degree.....	38
Transfer of Credit, Specialist's Degree.....	39
Transfer Policy.....	27
Tuition, In-State.....	45
Tuition, Out-of-State.....	45

U	
UNC Centennial.....	6
Unclassified Status, Graduate.....	34
Unclassified UNC Hours, Graduate.....	35
Undergraduate Academic Advising.....	9
Undergraduate Admission.....	27
University Center.....	10
University Resources.....	11

W	
Withdrawal From Class.....	18
Withdrawal From Classes, Fee.....	46
Withdrawal from the University.....	18
Work Towards Next Higher Degree.....	18

Psychology, MA	105
Psychology, MA	
Human Neuropsychology	105
Reading, MA	163
Recreation, MA	
Recreation Administration	214
Therapeutic Recreation	214
Rehabilitation Counseling, MA	
Vocational Evaluation	194
Secondary/Post Secondary School Counseling, MA	146
College Student Personnel Administration	147
Sociology, MA	
Criminal Justice	111
Family Studies	111
Social Issues	111
Special Education, MA	
Early Childhood Special Education	165
Moderate Needs	165
Profound Needs	166
Severe Needs: Affective	166
Severe Needs: Cognitive	167
Severe Needs: Communication	167
Severe Needs: Hearing	168
Severe Needs: Vision	169
Teaching the Gifted and Talented	170
Visual Arts, MA	240

Specialist's Degrees

Educational Administration, EdS	
General School Administration	156
School Psychology, EdS	153

Doctoral Degrees

Applied Statistics and Research Methods, PhD	
Measurement	96
College Student Personnel Administration, PhD	148
Counseling Psychology, PsyD	150
Counselor Education, EdD	149
Educational Administration, EdD	
Administration of Community Colleges	157
Administration of Higher Education	157
General School Administration	156
Educational Psychology, PhD	152
Elementary Education, EdD	162
Human Rehabilitation, PhD	194
Interdisciplinary Studies: Educational Technology, EdD	159
Music, DA	231
Music Education, DME	232
Physical Education, EdD	
Administration	210
Kinesiology	210
Pedagogy	211
Reading, EdD	164
School Psychology, PhD	154
Special Education, EdD	
Research	171
Special Education Administration	172
University Teaching	173

Course Descriptions

Accounting course descriptions, BAAC	249
Aerospace Studies course descriptions, AS	249
Anthropology course descriptions, ANT	245
Astronomy course descriptions, AST	249
Biology Education course descriptions, BIED	253
Biology course descriptions, BIO	253
Black Studies course descriptions, BLS	254
Botany course descriptions, BOT	255
Business Administration course descriptions, BA	249
Chemistry Education course descriptions, CHED	257
Chemistry course descriptions, CHEM	257

College Student Personnel Administration course descriptions, CSPA	261
Communication course descriptions, COMM	260
Communication Disorders course descriptions, CMDS	259
Community Health course descriptions, CH	256
Computer Education course descriptions, CED	255
Computer Information System course descriptions, BACS	250
Computer Science course descriptions, CS	261
Computing, General course descriptions, CG	256
Earth Sciences course descriptions, ESCI	277
Economics course descriptions, ECON	262
Educational Administration course descriptions, EDAD	263
Educational Field Experiences course descriptions, EDFE	267
Educational Field Experiences Lab School course descriptions, EDLS	267
Educational Psychology course descriptions, EPRE	276
Educational Technology course descriptions, ET	278
Elementary Education course descriptions, EDEL	265
Elementary Education: Early Childhood course descriptions, EDEC	264
Elementary Education: Middle School course descriptions, EDMS	267
Elementary Education: Reading course descriptions, EDRD	268
English as a Second Language course descriptions, ESL	277
English Education course descriptions, EED	273
English course descriptions, ENG	274
Environmental Studies course descriptions, ENST	276
Finance course descriptions, BAFN	251
Food, Nutrition & Dietetics course descriptions, FND	279
Foreign Languages course descriptions, FL	278
Foundations of Education course descriptions, EDF	266
French course descriptions, FR	279
Geography course descriptions, GEOG	280
Geology course descriptions, GEOL	282
German course descriptions, GER	283
Gerontology course descriptions, GERO	284
Hispanic Studies course descriptions, HISP	284
History course descriptions, HIST	285
Honors Program course descriptions, HON	287
Human Services course descriptions, HRS	287
Humanities course descriptions, HUM	288
Interdisciplinary Studies course descriptions, ID	288
Japanese course descriptions, JAPN	288
Journalism and Mass Communications course descriptions, JMC	289
Kinesiology course descriptions, KINE	290
Life of the Mind Program course descriptions, MIND	294
Management course descriptions, BAMG	251
Marketing course descriptions, BACMK	252
Mathematics course descriptions, MATH	291
Mathematics Education course descriptions, MED	293
Medical Technology course descriptions, MTEC	295
Meteorology course descriptions, MET	294
Military Science course descriptions, MS	295
Music course descriptions, MUS	296
Musical Theatre course descriptions, MT	295
Nursing course descriptions, NURS	303
Oceanography course descriptions, OCN	304
Philosophy course descriptions, PHIL	307
Physical Education and Dance course descriptions, PE	304
Physics course descriptions, PHYS	308
Political Science course descriptions, PSCI	312
Professional Psychology course descriptions, PPSY	309
Psychology course descriptions, PSY	312
Recreation course descriptions, REC	314
Science Education course descriptions, SCED	315
Science course descriptions, SCI	316
Social Science course descriptions, SOSC	318
Sociology course descriptions, SOC	316
Spanish course descriptions, SPAN	318
Special Education course descriptions, EDSE	269
Speech Communication course descriptions, SPCO	320
Statistics course descriptions, STAT	321
Teaching English as a Second Language course descriptions, TESL	322
Theatre Arts course descriptions, THEA	322
Visual Arts course descriptions, ART	245
Women's Studies course descriptions, WS	323
Zoology course descriptions, ZOO	324

