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## Furman University Catalogue 1999-2000

The purpose of this catalogue is to provide prospective students with a general description of Furman University along with detailed information regarding the curricula offered by Furman. Because the educatioilal process changes, the information and educational requirements contained herein represent the flexible program which may be altered at any time by Furman University.

The provisions of this catalogue do not constitute an offer for a contract which may be accepted by students through the process of registration and enrollment at Furman. FURMAN UNIVERSITY RESERVES THE RIGHT TO CHANGE, WITHOUT NOTICE, ANY FEE, PROVISION, POLICY, PROCEDURE, OFFERING, OR REQUIREMENT IN THIS CATALOGUE AND TO DETERMINE WHETHER A STUDENT HAS SATISFACTORILY MET FURMAN'S REQUIREMENTS FOR ADMISSION OR GRADUATION.

In compliance with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973, Furman University is committed to providing equal access to university programs and facilities to otherwise qualified students and to providing equal opportunity for all employees and applicants for employment regardless of disability.

Furman University offers equal opportunity in its employment, admissions, and educational activities, in compliance with Title IX and other civil rights laws.

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## Introducing Furman



Furman University is an independent, coeducational, liberal arts college located on a 750-acre suburban campus on the outskirts of Greenville, South Carolina. Founded by South Carolina Baptists in 1826, the university is an old institution; yet its facilities are modern, all the buildings on the present campus having been constructed since the late 1950s. Most of Furman's 2,500 undergraduates are from the South Atlantic region, but more than 40 states and 15 foreign countries are represented in the student population. Working with the Furman students are a faculty and staff whose primary concern is to enhance student learning. Over 90 percent of the faculty hold doctoral degrees in their academic disciplines.

## History

Furman University is named for Richard Furman (1755-1825), a prominent pastor in Charleston, South Carolina, who was president of the nation's first Baptist Convention and a leader in Baptist higher education.

The university traces its roots to two academies established in the early nineteenth century: the Greenville Female Academy, a part of the Greenville Academy, was chartered in 1820; the Furman Academy and Theological Institution for men was founded in 1826 by the South Carolina Baptist Convention in Edgefield, South Carolina.

During its early decades, the Furman Academy moved first to Stateburg, then to Winnsboro, South Carolina. In 1850 the school was chartered as the Furman University and moved to Greenville. Eight years later its theological department became the Southern Baptist Theological Seminary, which eventually moved to Louisville, Kentucky. Between 1920 and 1932 the university included a law school, but for most of its history Furman has been a liberal arts college. In

1854 the Greenville Baptist Female College opened on the campus of the Greenville Academy. It was governed by Furman's board of trustees until 1908, when it acquired its own board. In 1916 it became the Greenville Womans College.

Furman was accredited in 1924 by the Southern Association of Colleges and Schools, and that same year the university became a beneficiary of The Duke Endowment established by James Buchanan Duke. In 1933 Furman and the Greenville Woman's College were coordinated under a single president and board.

Furman broke ground for a new campus five miles north of Greenville in 1953, and five years later held its first classes on the present site. Furman received a chapter of Phi Beta Kappa in 1973. In 1992 formal ties with the South Carolina Baptist Convention ended, and the college became independent. Today Furman ranks among the leading liberal arts colleges in the nation.

## Mission and Scope

The primary mission of Furman as a liberal arts college is to provide a distinctive undergraduate education encompassing humanities, fine arts, social sciences, mathematics and the natural sciences, and selected professional disciplines. In addition to its primary emphasis on undergraduate education, Furman offers master's degree programs in education, health and exercise science, and chemistry. The university also provides a continuing education program for the larger Greenville community.

At the heart of the undergraduate course of study is the general education program. Its purpose is to ensure that all undergraduates will be introduced to the major methods of inquiry that characterize liberal study. Twenty-four academic departments at Furman offer 36 majors. In addition, there are opportunities for interdisciplinary study and for developing
individualized majors. In accordance with the traditional assumptions of liberal education, both out-of-class and in-class programs are designed to develop the whole person - intellectually, physically, socially, emotionally, and spiritually.

Furman seelcs highly motivated students with inquisitive minds, varied perspectives, a sense of personal integrity and moral responsibility, and the potential to be leaders and to make future contributions to society. The preponderance of Furman students plan to enter professions such as education, law, and medicine; about 40 percent of the graduating class go directly into graduate or professional schools.

## Purpose and Aspirations

Founded by Baptists and grounded in Judeo-Christian values, Furman challenges students, faculty, and staff to grow both in knowledge and in faith. The university values excellent teaching and close student-faculty relationships. Small classes, individual instruction, empathetic advising, and personal attention promote active learning and cultivate intellectual curiosity.

The university encourages its students to engage ethical issues and to explore spiritual concerns. Furman manifests its
respect for the ethical and spiritual dimensions of human experience in many ways. Within the curriculum, these dimensions are often integral to academic disciplines and form the basis for classroom discussions. Outside the classroom, the ethical and spiritual dimensions are expressed in the chapel that stands across from the library, an active chaplaincy and a program in church-related vocations, an array of vital student religious organizations, and a nationally recognized community service program.

Furman aspires to be a diverse community of women and men of different races, religions, geographic origins, socioeconoinic backgrounds, personal characteristics, and interests. This diversity reflects values the university hopes to embody: openness, honesty, tolerance and mutual respect, civic responsibility, global awareness, and bold intellectual inquiry. These values foster a critical examination of inherited assumptions, even as they protect freedom of expression and the open exchange of ideas.

In sum, Furman University aspires to be a diverse community of learning, harinonious in its differences, just and compassionate in its transactions, and steadfast in its commitment to an educational program of the highest quality.


## An Engaged Approach to Liberal Learning

In recent years Furman University has been evolving into a new type of liberal arts college tlzat offers students more opportunities to learn by doing. While grounding its curriculum in tlze humanities, fine arts, and sciences, Furman offers courses in fields that are more professionally oriented: business administration, accounting, education, health aizd exercise science, and music performance. In addition, Furman emphasizes education outside the traditional classroom, providing opportunities for students to put into practice the theories and methods learned from texts or lectures. For example, Furman has become a national leader in undergraduate research aizd collaborative research projects involving students and professors.

Engaged learning taltes other forms at Furman. A significant number of Furman students participate in internships. Others serve as teaching apprentices on campus or in elementary and secondary schools. Almost a quarter enroll in study abroad programs sponsored by the university. And a majority work as volunteers for social service agencies or other helping programs in the Greenville community. For many Furman students, these out-of-class opportunities become life-changing experiences.

By supplementing classroom instruction with opportunities for collaborative research and off-campus learning, Furman aims to give students greater responsibility for their education, to develop their selfconfidence, and to sharpen their leadership sltills.

## Expected Educational Outcomes

Furman nurtures a commitment to independent thought and lifelong learning. By providing students with a broad exposure to the liberal arts, it seelts to produce
graduates grounded in tlze traditional sources of ltnowledge yet capable of devising new solutions to problems in their chosen fields. Every Furman graduate should have:

- the ability to read and listen with comprehension aizd to write and speak with clarity and precision
- a sense of the context - physical, biological, historical, social, ethical, and spiritual - within which life proceeds
- an understanding of the central themes and ideas of Western civilization and an appreciation of cultures outside the Western tradition the ability to make informed moral judgments and to appreciate the ambiguities tlzat enliven all action and choice
- an appreciation of the aesthetic dimension of human expression
- an exposure to the inethodology and insights of the social sciences
knowledge of the basic principles and procedures of one or more of the natural sciences
- a deinonstrated proficiency in mathematics
- the understanding of and ability to use information technology
- the knowledge of a foreign language and its literature the understanding in depth of a chosen discipline - its scope, methodology, and application — and the opportunity to explore an interdisciplinary concentration
- the capacity for continuing selfeducation necessary to deal with change.


## Accreditation

Furman University is accredited to award bachelor's and master's degrees by the Commission on Colleges of the Southern Association of Colleges aizd Schools, 1866 Southern Lane, Decatur, Georgia 30033, telephone (404) 679-4501.

Furman is a member of the Southern University Conference, Association of American Colleges and Universities, and South Carolina Association of Colleges, and is on the approved list of the American Chemical Society. The program in music is accredited by the National Association of Schools of Music. The Teacher Education Program is accredited by the National Association of State Directors of Teacher Education Colleges.

## Assets

Furman University has assets of approximately $\$ 345,000,000$ including endowment funds. It is one of the beneficiaries of The Duke Endowment, which was created by the late James Buchanan Duke.

## Campus and Buildings

Furman University is situated in the scenic Carolina foothills, only five miles from Greenville, which offers the advantages of a city with a metropolitan population of nearly 350,000 .

Since 1958, Furman has occupied a beautifully designed 750-acre campus with a 30 -acre lake and an 18-hole golf course. A rose garden, Japanese garden and many fountains add to the beauty of the campus.

Most of the 31 major buildings on campus are faced with handmade Virginia brick and many have columned porches, which adds the architectural flavor of the Old South to the latest in educational facilities.

First to be noted by visitors is McAlister Auditorium, site of many university and community-sponsored performances. Adjoining it, the Homozel M. Daniel Music Building provides modem studios and performance rooms for Furman's noted music department. Nearby, the

Thomas Anderson Roe Art Building has a gallery for traveling exhibits and facilities for multimedia art instruction.

James C. Furman Hall contains wellequipped classrooms and seminar rooms, a language resource center, media center and several computer laboratories. JohnL. Plyler Hall of Science and Richard W. Riley Hall for Computer Science and Mathematics contain highly sophisticated scientific instrumentation.

At the center of the campus is the James Buchanan Duke Library, erected in 1957 with funds provided largely by The Duke Endowment. It contains more than 390,000 volumes, including the Baptist Historical Collection. The library acquires approximately 10,000 new books each year and provides extensive access to online retrieval. The Joseph Baylis Earle Infirmary is located nearby.

The University Center, recently expanded and remodeled, is a hub of student activities, complete with campus store, post office, food court, lounges and meeting rooms. A landmark of the campus is the Bell Tower, gift of the family of Alester Garden Furman and replica of the tower of the Main Building on the former men's campus in downtown Greenville. Its 60-bell carillon honors the late John Edwards Burnside, class of 1917.

The Herman W. Lay Physical Activities Center provides for an extensive curriculum in health and exercise science, as well as a full program of recreational and intramural sports.

Recent additions to the campus are the Nan Trammell Herring Music Pavilion; John E. Johns Hall for the social sciences; Timmons Arena, a multi-purpose facility for athletics, concerts and other activities; and North Village, an apartment-style residential complex.

## Academic Program



The academic program at Furman University prepares qualified students to enter graduate and professional schools or to go directly into such fields as business, teaching and public service.

## Degrees

Courses are offered leading to the degrees of Bachelor of Arts, Bachelor of Music, Bachelor of Science, Bachelor of General Studies, Master of Arts, and Master of Science. See pages 41-45 for specific requirements for the bachelor's degrees and pages 137-143 for the master's degrees.

The Bachelor of Arts degree is awarded in the following major subjects: accounting, art, Asian studies, biology, business administration, communication studies, computing-business, earth and environmental sciences, economics, education, English, French, German, Greek, health and exercise science, history, Latin, mathematics, mathematics-economics, music, philosophy, political science, psychology, religion, sociology, Spanish, theatre arts and urban studies.

The Bachelor of Music degree is available to students who wish a greater specialization in music than the Bachelor of Arts provides. It is awarded in performance, church music, music education and theory.

The Bachelor of Science degree is awarded to students who desire a greater concentration in science or mathematics than the Bachelor of Arts affords. It is conferred in the following major subjects: biology, chemistry, computer science, computer science-mathematics, earth and environmental sciences, health and exercise science, mathematics, mathematicseconomics, physics, pre-engineering and psychology.

The Bachelor of General Studies is designed for students in the Division of Continuing Education who desire to do their academic work in the evening.

The Master of Arts degree is awarded in education and health and exercise science, and the Master of Science degree is awarded in chemistry.

## Academic Advising

Every student is assigned an academic advisor with whom the student meets regularly to plan an educational program based on interests, aptitudes, and educational goals. Although the student has the final responsibility for making decisions about his or her academic program and for ensuring that degree requirements are satisfied, the advisor plays an important role by offering informed advice about course selections, by providing information about cocurricular and extracurricular educational opportunities such as study abroad, internships, and undergraduate research, and by referring the student to campus support services.

## General Education

To acquire the breadth in educational experience which characterizes liberal education, develop intellectual discipline, discover their interests and build a foundation for specialization, students must complete certain General Education courses in four broad subject areas: fine arts, humanities, mathematics and natural sciences, and social sciences. Students begin these courses during their freshman and sophomore years.

## Asian-African Program

The Asian-African program emphasizes major dimensions of experience from the non-Western two-thirds of humanity. By offering students knowledge of Asian and African civilizations, it provides fresh perspectives on their own cultural heritage and helps them toward a broader and deeper understanding of a rapidly changing world. See page 57.

## Cultural Life Program

The Cultural Life Program is designed to supplement the educational experience offered to Furman students. The program includes a broad selection of cultural events throughout the year - plays, lectures and concerts. See page 43.

Major
All students select a major subject in which they normally talce six to eleven courses.

## Interdisciplinary Majors

Students may major in any of the disciplines listed under Degrees above, propose an individualized interdisciplinary major as explained below or pursue an established interdisciplinary inajor in one of the following areas: Asian studies, computingbusiness, computer science-mathematics, mathematics-economics, or urban studies. Many of the preprofessional curricula also have an interdisciplinary foundation. See pages 15-16.

## Individualized Curriculum Program

Students who have educational goals for a major which they feel can best be met by an interdisciplinary program of study may propose an individualized curriculum program. If the proposal is approved by the Individualized Curriculum Program Committee, the student then carries out the program under the supervision of this committee and the student's advisor. Individualized programs should be consistent with the broad purposes of Furman University as a liberal arts college. See page 44.

## Concentrations

While all Furman students are required to declare an academic inajor in order to receive a bachelor's degree, students may choose to supplement their major by concentrating on a specific topic from the perspective of different academic disciplines. Consequently, the university has identified certain groups of existing courses, the focus of each group being a specific area deemed appropriate for an academic concentration.

In general, a concentration consists of 16 to 24 hours of related course work selected from no fewer than three departments. Furman offers interdisciplinary concentrations in Women's Studies, Latin American Studies, and Classical Studies.

## Women's Studies

Women's Studies is a mode of inquiry that attempts to distinguish among the various forces that shape gender roles. As such it treats an important dimension of human experience often ignored in conventional curricula. Courses in Women's Studies examine women in different historical and modern societies and the ways in which political, social and economic factors affect their status and outlook.

Students may supplement their inajor studies with an interdisciplinary concentration in Women's Studies by taking four courses from the following list with at least three departments represented: Economics and Business Administration 33; English 76 and 77 ; History 22 and 26; Philosophy 46; Sociology 42; and Religion 38. On occasion, special topics courses are offered that also satisfy the requirements for the concentration.

Interested students should contact the chair of the concentration oversight committee.

## Latin American Studies

The interdisciplinary concentration in Latin American Studies offers students a coherent program that complements their major while providing them a broader perspective on the differences and similarities among people of the region. Some courses are oriented toward problem solving and focus on economic, societal, political, environmental and technological realities; others are grounded in an understanding of the cultural and ideological differences that distinguish and characterize societies and their people.

To satisfy the requirements for the concentration, students must achieve language competency through Spanish 21 and talce IDS 75, an interdisciplinary course in Latin American Studies. Students must also talce three courses from the following list, with at least two departments represented: Anthropology 26; Art A37; Biology 35 and 54; Spanish 22, 27, 37, 39 and 47; History 23 and 25; and Political Science 49.

Interested students should contact the chair of the concentration oversight committee.

## Classical Studies

Classical Studies refers to those disciplines which study the culture, civilization and heritage of Greece and Rome from roughly the Bronze Age (3000-1000 B.C.) to the fifth century A.D., and those parts of the Mediterranean basin, Europe, Africa and Asia where these ancient civilizations either originated or spread. It includes disciplines that deal with ideas and themes that originated in the classical world and profoundly influenced later thinkers and institutions.

To satisfy the requirements for a concentration in Classical Studies, students complete at least five courses from the following list. Two courses must be from Classics, Latin and/or Greek; one
course may also count toward the General Education requirement.

Courses that may be applied toward a Classical Studies concentration are: Classics $31,32,33,34,35,40,41,50$; Greek 21, 22, 31, 32, 33, 34; Latin 21, 31, 32, 33, 34; Art 36; Communication Studies 46; Theatre Arts 32; History 30; Philosophy 31; Political Science 13, 60; Religion 22, A36.

Interested students should contact the chair of the concentration oversight committee.

## Academic Calendar

The academic year at Furman consists of three terms. The fall and spring terms are 12 weelcs long. The winter term is eight weelcs. During the fall and spring terms a student usually talces 12 hours (three 4hour courses); during the winter term, 8 hours (two 4-hour courses). Depending on the nature and level of the course, class meetings are scheduled up to five times a week, Monday through Friday. Class periods are 50 minutes in the fall and spring terms and 75 minutes in the winter term.

## Off-Campus Programs

The university offers a number of offcampus programs. The Washington, D.C., internship program (arranged through the Washington Center) is offered during spring and summer terms. Through formal agreements with other universities, Furman offers students the option of spending a fall term at the Duke University Marine Laboratory in Beaufort, North Carolina, or participating in Earth or Universe Semester at Columbia University's Biosphere 2 in Tucson, Arizona.

Participation in an off-campus study program is voluntary on the part of the student. Such releases as the University might promulgate must be signed in order to participate.

## Study Abroad Programs

Furman offers to qualified students a number of credit prograins for study abroad. These range from short-term courses during the winter term to full-term programs of more than three months' duration. Participants are accompanied by Furman faculty members who coordinate and direct the programs. All credits and grades earned overseas are granted on the same basis as those obtained on campus.

The English, political science, history and economics and business administration departments cooperatively sponsor a fall term in England, with resident study in London and Stratford-upon-Avon. The art and inusic departments have also provided parts of this program. The Department of Modern Languages and Literatures offers a term in each of three centers: Madrid, Paris and Bonn, Germany. All participants in these four programs take three courses for which they earn 12 hours' credit. Each program also includes a field study of the host country with a period of time for independent travel.

Winter term travel-study in 2000 will
consist of prograins in Africa, the Middle East and the Mediterranean. Furman students may also spend a term as exchange students at Kansai Gaidai University in Japan, Hong Kong Baptist University, Rijksuniversiteit Grongingen in The Netherlands, and Rhodes University in South Africa.

Through Furman's membership in the Southern Atlantic States Association for Asian and African Studies, students may take part in fall semester prograins in India (centered in Madras) and in China (centered in Beijing). As a member of the Associated Colleges of the South, Furman provides opportunities for students to participate in ACS programs based in Latin America or to participate in affiliate programs of the consortium, such as the British Studies at Oxford program sponsored by Rhodes College. Students are also encouraged to consider junior year abroad programs offered by accredited schools and institutions such as the Institute of European Studies with which Furman maintains an affiliation.


Students interested in these programs should consult the Coordinator of Study Abroad Programs or the Director of International Education.

Participation in an off-campus study program is voluntary on the part of the student. Such releases as the University might promulgate must be signed in order to participate.

## Independent Study and Research

All integral part of the educational program at Furman is the opportunity to do independent study and research. In independent study courses, with the assistance of faculty members, students develop their own goals and their own learning activities.

Research projects, on the other hand, offer students an opportunity to engage in original scholarship, often in collaboration with a faculty member. The Furman Advantage Research Fellowship program supports approximately 35 student-faculty research projects each summer.

Students sometimes engage in offcampus independent study and research. In the past, students have conducted offcampus projects at such places as Charleston, Oak Ridge and the Savannah River Project. Independent study is offered in every department, and in some departments students may take up to three independent study courses in the major.

## Internships and Cooperative Education

Furman strongly supports programs which allow students to apply their in-class learning to a work experience. An active internship and cooperative education program provides opportunities throughout the academic year and during the summer for students to test career choices, to integrate theory with practice and to explore future job possibilities.

Internships may be developed through the departments or through the Office of the Assistant Academic Dean for Undergraduate Research and Internships. Positions are directly related to majors and may be part time or full time. Recent internships have included positions with the local solicitor's office, in a bank trust department and with representatives and senators. Journalism, hospital administration, social service and laboratory testing are among other options.

Cooperative education involves alternating terms of work and study beginning in the sophomore year and continuing through graduation. The cooperative placements are progressively more responsible, paid positions which allow students to earn and learn on the job. Co-op positions are available nationally in business and governmental agencies. For more information, students should contact the Assistant Academic Dean for Undergraduate Research and Internships.

## Teacher Education Program

Students may prepare for certification in elementary education, early childhood education, special education and secondary education. Students in special education may concentrate their studies in mental retardation, learning disabilities or emotional/behavior disorders. Students in secondary education major in a subject field and talce a required block of education courses. For more information, students should consult the Director of the Teacher Education Program.

## Other Professional Programs

Graduates of Furinan's professional programs in music and business administration are prepared to enter beginning-level professional positions. Graduates who are prepared to do so may wish to continue their studies in graduate school. Students
in the Bachelor of Music program may prepare to be music educators, performers or church musicians. Students in business administration may prepare for careers in such areas as accounting, marketing and banking. Additionally, the Department of Religion offers a major designed for those who wish to work with elementary and youth programs of the church.

## Preprofessional Programs

Furman University offers programs which prepare students for professional studies in law, theology, engineering and industrial management as well as health fields such as medicine, dentistry, veterinary medicine, optometry, nursing, occupational therapy, pharmacy, physical therapy, and physician assistant, among others. Of course, Furman prepares students to enter, at either the graduate or undergraduate level, any professional program that is based on a liberal arts education.

## Christian Ministry

Furman provides opportunities for students who wish to prepare for the various aspects of Christian ministry. Although no particular major is required, many courses and other educational experiences permit students to explore their interest in and fitness for religious vocations. In general, church-related vocations students should major in religion or at least discuss their program of studies with advisors in the religion department. Counseling and guidance are offered by Dr. James M. Pitts and Dr. Victor A. Greene, coordinators of Church-Related Vocations.

## Premedical

Premedical and predental students may pursue either of two programs. They may complete all requirements for a degree at Furman, or they may enter a medical or
dental school after their third year at Furman; that is, after they have completed at least 96 hours at Furman. Students in both programs, however, are advised to take a fairly standard group of courses: two in biology, four in chemistry, two in mathematics, two in physics and two in English. Those who complete all their degree requirements at Furman may major in any subject they wish, as long as they complete the courses listed above. Those who enter medical or dental school after their third year at Furman may qualify for an undergraduate degree from Furman when they have successfully completed their first year in an accredited medical or dental school. Those interested in a career in veterinary medicine, optometry, osteopathy or podiatry generally complete the same courses as premedical and predental students. Students interested in these programs should register with the health professions advisor, Dr. Gilbert Fairbanks, and receive a copy of Furman's Health Career Planning Guide.

## Prelaw

The Association of Law Schools, to which most law schools belong, states that there are two objectives of undergraduate education for law students: first, the student should learn to reason logically; second, the student should learn to express thoughts clearly and concisely both orally and in writing. Dr. Donald P. Aiesi in the Department of Political Science serves as prelaw advisor.

Pharmacy, Physical Therapy, Physician Assistant, and Nursing

Dual degree programs (3 years at Furman plus 2 years at a professional school) can be arranged for these popular health fields as well as others. Such programs require that the student complete at least 96 hours
at Furman, completing General Education requirements, prerequisites for the professional school, and core requirements for a major (See page 41). Early planning for these dual degree programs is a must, since there is no room for elective courses. It is essential to get Furman's Health Career Planning Guide from the health professions advisor, Dr. Gilbert Fairbanks.

## Engineering

Furman cooperates with Auburn University, Clemson University, Georgia Institute of Technology, North Carolina State University and Washington University at St. Louis in dual degree programs in engineering, in which a student can qualify in approximately five years for a degree from both institutions. Students under this program may major in either pre-engineering or physics. Students interested in engineering should obtain a copy of the document Furman University Dual-Degree Program in Engineering from the Department of Physics.

Forestry and Environmental Studies
A student may obtain a dual degree in five years from Furman and Duke University's School of Forestry and Environmental Studies. Students interested in this program should consult a member of the Department of Biology.

## ROTC

A General Military Science Course of the Senior Division, Reserve Officers' Training Corps, is maintained as a regular department at Furman. The first two years of ROTC comprise the Basic Course; the last
two years, including a six-week summer camp, comprise the Advanced Course. All students may take military science courses for elective credit. The ROTC program is open to both men and women, and scholarships are available. The Department of the Army pays each Advanced Course student $\$ 150$ per month during the school year and approximately $\$ 750$ for attending the six-week Advanced Camp. Successful completion of the Basic and Advanced programs leads to a commission in the U.S. Army, Active or Reserve forces.

## Summer Session

Furman operates two terms each summer, the first for six weeks; the second, four weeks. Undergraduates may take two courses during the first term and one during the second term. The summer session enables students to get ahead in their degree program, enrich their program or make up courses not completed during the academic year. For further information, consult the Associate Dean for Summer Session.

## Continuing Education

For part-time, commuting students, the Division of Continuing Education offers a program during the evening that leads to the degree of Bachelor of General Studies. The program consists of General Education courses, elective courses and major courses. Majors are available in accounting, business administration and sociology. For further information, consult the Director of Continuing Education.

## Student Life



AFurman education includes social, physical, cultural and spiritual growth as well as intellectual development. The leadership of the Association of Furman Students, the chaplains, and the Student Services staff work together to help students grow.

## The Association of Furman Students

The organization through which undergraduate students work to achieve their goals in the Furman community is the Association of Furman Students (AFS). Its council is composed of 25 members and five officers with representation from the four classes, the commuters, resident students and minority/international students. All undergraduate students are members of the association, which is funded through a special fee paid each term.

The AFS council conducts its business each Monday evening in open meetings. The Office of Student Services serves as advisor.

## Activities and Programs

## University Center

The University Center is the focal point of much student activity and planning. Here are found the student activities offices, university store, post office, Pala Den snack bar, meeting rooms, campus radio station and offices for student publications, Inter Fraternity and Panhellenic councils, and AFS. Recreational facilities include video games, pingpong and pool tables and a largescreen TV for VHS films.

But the University Center is more: it is student-centered programs, developed by more than 200 students, faculty advisors and the Director of the University Center. The programs include the Collegiate Educational Service Corps (CESC),

Dialogue, Coffeehouses, Values, and the L. D. Johnson Memorial Lecture Series. In CESC, more than 1,500 Furman students serve as volunteers in over 90 agencies throughout the Greenville area. CESC's year of service to others culminates in a campuswide May Day Play Day for the students and the people CESC has helped. Dialogue, a program for freshmen, eases the transition to college through small groups that meet informally with an upperclassman and a faculty or staff member in the early fall. Coffeehouses showcase student and faculty talents in music, dance or other entertainment. Values involves students and faculty in serious discussion of ideas. In the L. D. Johnson Memorial Lectures, faculty members speak on "What Really Matters."

## Office of Student Activities

Students find opportunities through this office to become actively involved in the Furman community. The Student Activities area encourages development of leadership and human relations sltills, recognition of values, and understanding of group dynamics. Students interested in leadership education and development can apply for participation in the Furman Leadership EDGE program during their freshman year and take part in specially designed training programs during their sophomore, junior and senior years.

In addition, the Director of Student Activities advises the Furman University Student Activities Board (FUSAB), the student organization which plans a wide range of social, cultural, and recreational activities on campus. Working to address the needs of the campus population, FUSAB arranges an exciting student life program through such events as Homecoming, dances, major concerts, appearances by comedians, lectures, special events, and special interest months.

## Office of Multicultural Affairs

The mission of the Office of Multicultural Affairs is to facilitate the creation of an educational environment in which diversity is understood, embraced and celebrated.

The office strives to improve the quality of life on campus by implementing comprehensive educational, cultural and service programs to promote multicultural awareness and respect for diversity. Programs include Orientation activities, mentor programs, discussion groups and the Blaclc Seniors Banquet.

The Director of Multicultural Affairs advises the Student League for Blaclc Culture (SLBC) and the Furman University Gospel Ensemble. The purpose of SLBC is to encourage Black awareness through the promotion of Blaclc culture. Programs include a spealters bureau, community service, Blaclc History Month events, a newsletter (The River), and social activities.

The Gospel Ensemble is a nondenominational organization whose purpose is to perform Christian music in the African tradition. The ensemble presents three major concerts and various campus and local performances each year.

## Student Publications

Students publish The Paladin, the weekly newspaper; Echo, the literary magazine; and Bonhomie, the yearbook. They also manage WPLS-FM, an educational radio station. Any student may compete for editor positions through the Student Communications Board. All publications are available free to students.

## Athletics

## Intercollegiate

The intercollegiate athletic program for men consists of baseball, baslcetball, cross country, football, golf, soccer, tennis and track. For women, it consists of basltetball,

cross country, golf, soccer, softball, tennis, indoor and outdoor track and volleyball. Every intercollegiate activity is supervised by qualified coaches.

## Recreational Sports

The Recreational Sports Department is composed of the Intramural Sports and the Club Sports programs.

The Intramural Sports program offers 22 activities for men and women, ranging from soccer, baslcerball, and softball to swimming and tennis. Men and women participate together in such sports as softball and sand volleyball.

Through the Club Sports program students may compete against other universities in crew, weightlifting, fencing, swimming, Aikido, ice hockey, team handball, rugby, Kendo, triathlon and fitness, and ultimate frisbee.

Herman Lay Physical Activities Center
Furman has exceptional facilities for physical activities. In the P.A.C., as students call the center, are courts for handball, racquetball and paddleball; a swimming pool with separate diving pool; a gym for basketball, volleyball or badminton; a dance studio; and a fitness center with stationary bicycles, rowing ergometers, freeweights and a cross country ski simulator.

## Cultural Opportunities

## The Arts

Through the combined facilities of the university and the Greenville community, students may attend lectures, plays, concerts, recitals, art exhibits and other cultural programs.

Notable guest speakers have included U.S. Senator Fritz Hollings, Jesse Jackson, journalist Helen Thomas, authors Pat Conroy and Dorothy Allison, Indianrights advocate LaDonna Harris and author/diplomat Carlos Fuentes.

Exhibits of works by Furman art students and faculty and touring exhibits are displayed in the Thomas Anderson Roe Art Building gallery.

Three or four plays a year, ranging from classical to modem, from musical review to mystery thriller, are presented in the Furman Theatre.

The Furman University Band, Furman Singers, Furman Chorale, Furman Chamber Choir, Furman Orchestra, Furman Jazz Ensembles, Woodwind and Brass Ensembles, Opera Theater, Greenville Chorale, Greenville Symphony Orchestra and master classes offered by guest artists offer valuable training and experience to students interested in tnusic.

## Organizations

## Honor Societies

Furman's chapter of Phi Beta Kappa, the oldest scholastic honorary in America, is Gamma of South Carolina. Candidates for Bachelor of Arts and Bachelor of Science degrees with at least 95 hours in liberal arts (as opposed to preprofessional) courses are eligible for election, on the basis of qualifications set by the chapter in accordance with the regulations of the national organization.

Phi Eta Sigma is a national scholastic honor society for college freshmen, founded in 1923. Its goal is to encourage high scholastic attainment among freshmen in institutions of higher learning.

Organized in 1916, Pi Kappa Lambda is the national honor society in music. The Furman chapter, Gamma Beta, was chartered in 1970. Seniors and juniors with a minimum residence of six terms at Furman who are outstanding in musicianship and scholarship qualify for membership.

Organized in 1904, the Quaternion Club is an undergraduate/alumni club for men. Undergraduate membership, limited to juniors and seniors, is based on character, ability and loyalty to the institution.

Founded in 1938, Senior Order is an organization for senior women who have shown outstanding abilities in their college careers and have rendered service in the college community. Membership is limited to no more than 15.

Omicron Delta Kappa is composed of junior and senior men and women who have shown qualities of character, leadership, scholarship and service to the university and its constituents. Omicron Delta Kappa's main concern is leadership and service. Furman's chapter sponsors the Babb and Reid awards to the outstanding female and male members of each class.

Kappa Delta Pi is an honor society that recognizes outstanding achievement among students in the Teacher Education Program. The Xi Epsilon chapter was installed at Furman in 1977. Also open to graduate students in education, membership is based on overall academic record, performance in the Teacher Education Program and potential for significant contribution to education.

Alpha Sigma Lambda is the national honorary society in Continuing Education, recognizing students who achieve academic excellence while facing the competing interests of home and careers. Furman's chapter, Gamma Theta, was chartered in 1982.

Among other national honor societies are Alpha Epsilon Delta, premedical; Alpha Kappa Delta, sociology; Chi Beta Phi, science; Eta Sigma Phi, classics; Omicron Delta Epsilon, economics; Phi Alpha Theta, history; Phi Sigma Iota, foreign language; Phi Sigma Tau, philosophy; Pi Gamma Mu, social science; Pi Mu Epsilon, mathematics; Psi Chi, psychology; and Sigma Pi Sigma, physics.

Departmental Clubs and Professional Fraternities

Membership in departmental clubs and professional fraternities is by invitation, based on interest. Organizations at

Furman include AIME, affiliate chapter of the American Institute of Mining, Metallurgical and Petroleum Engineers; American Chemical Society, student affiliate chapter; Art Students' League; student chapter of the Association for Computing Machinery; Band Letter Club; Beta Chi, biological sciences club; Furman Theatre Guild; Kappa Delta Epsilon, national professional education sorority; Le Salon Francais; Mu Phi Epsilon, national professional music fraternity; Phi Mu Alpha Sinfonia, national professional music fraternity; Philosophy Club; Society of Physics Students; Spanish Club; Political Science Club.

## Sororities and Fraternities

Approximately 35 percent of Furman students enroll in the university's seven sororities and eight fraternities.

The seven sororities are Alpha Delta Pi, Alpha Kappa Alpha, Chi Omega, Delta Delta Delta, Delta Gamma, Kappa Delta, and Kappa Kappa Gamma. The eight fraternities are Beta Theta Pi, Kappa Alpha Order, Kappa Alpha Psi, Pi Kappa Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu , and Tau Kappa Epsilon.

New students must attain a 2.0 or better grade-point average on at least eight credit hours at Furman before being allowed to pledge a Greek organization. The Office of Student Services serves as advisor to the Furman Panhellenic and Inter Fraternity Councils.

## Religious Life

Furman encourages students to engage ethical issues and explore spiritual concerns. The chaplains provide Christian ministry to the Furman community and nurture campus religious life, offering pastoral care and prophetic witness. They encourage an ecumenical spirit that affirms the religious traditions represented on
campus. Stressing a collegial approach, the chaplains view ininistry as a cooperative effort of clergy, students, faculty and staff.

Church affiliation and participation are encouraged. A service of worship, led by the university chaplains, faculty and students, is held each Sunday morning at 10:30 in the Charles E. Daniel Chapel.

Complementing the leadership of the two university chaplains, 12 campus ministers offer leadership to their groups and are available for pastoral care and counseling. Campus religious organizations include: Baptist Student Union, Canterbury (Episcopal), Channing Brown Circle (Unitarian Universalist), ChurchRelated Vocations, Fellowship of Christian Athletes, Furman University Gospel Ensemble, Greek Orthodox Young Adult League, Habitat for Humanity, InterVarsity Christian Fellowship, Jewish Student Association, Lutheran Student Association, Muslim Student Association, Newman Club (Roman Catholic), Presbyterian Westminster Fellowship, Wesley Foundation (United Methodist), Worldwide Discipleship Association, and Young Life. They provide opportunities for service and fellowship and seek to create an atmosphere conducive to spiritual growth. Religious Council, composed of group representatives, the secretary of religious affairs for the Association of Furman Students, and the chaplains, promotes mutual understanding and cooperation among the various groups.

## Student Services

Career Services
The Office of Career Services strives to equip students with the knowledge and sltills necessary to make plans and decisions related to career goals.

The office is organized into two areas: Career Guidance and Employer Relations. Guidance services include individual
counseling, self-assessment, vocational testing, and access to occupational and graduate school information. Seminars and workshops on topics such as resumé writing, interviewing sltills and job search strategies are offered regularly.

Employer Relations programs are designed to match Furman students with organizations for experiential educational opportunities as well as job placement. Special events hosted by the office include on-campus interviews, Career Day, Shadow Day, Education Career Day, Junior Jumpstart and mock interviews. Services are available to students and alumni at no cost.

## Commuter Services

Approxiinately 500 Furman students live off campus, and they are urged to participate fully in all extracurricular activities. Ample free parlting is available and lockers and post office boxes may be obtained in the University Center. Commuters may purchase food at the Pala Den in the student center or in the dining hall. A listing of off-campus housing is maintained in the Office of Student Services.

## Counseling Center

The Counseling Center offers counseling and mental health services to help students cope with college life. Counselors are available to assist students with a variety of concerns ranging from relatively mild distress to more severe psychological disorders.

Services provided by the Counseling Center staff include individual counseling, support groups for eating disorders, inental health consultation, and educational prograins on topics related to mental health and personal development. Counseling Center personnel also help to arrange academic accommodations for students with disabilities and assist in prograins and services for returning adult students. All
professional services are offered on a confidential basis by appointment.

The office coordinates the administration of the Graduate Record Examination, Law School Admission Test, and Miller Analogies Test. Information about these tests is available in the office and through the Testing Information Telephone Line.

## Educational Records

The Family Educational Rights and Privacy Act provides for students' access to their educational records. Students wishing to inspect their records may do so by going to the appropriate office and presenting their identification cards. Furman complies with all federal and state statutes regarding confidentiality of student records. Students are guaranteed opportunities to challenge the accuracy of files or records. Requests for hearings are made to the Office of Student Services.

## Dining Services

All students who live in university residence hall rooms without kitchens are required to subscribe to a meal plan. Furman offers five different meal plans. Freshmen are required to choose one of two plans: 19 meals-per-week with 25 Food Points or 15 meals-per-week with 115 Food Points.

In addition to these two plans, sophomores, juniors and seniors who live in residence hall rooms without kitchens and students who live off campus may choose from several other plans. Students living off campus or in auxiliary housing areas with designed cooking facilities may purchase selected meal plans but are not required to do so. (See page 32.)

Food Points offer "points" that may be used on a $\$ 1$ per point basis to purchase any item sold in the dining hall or Pala Den. Food Points, which are stored on the student ID card, expire at the end of each
term and are not refundable for cash.
The dining hall is open throughout the academic year except during official university vacations.

## Health Services

Consisting of an outpatient clinic and inpatient overnight facilities, the Joseph Baylis Earle Infirmary is the home of Health Services for Furman undergraduates. Open 24 hours a day, seven days a week when residence halls are open, the infirmary is staffed by one fulltime nurse practitioner, four full-time nurses, three part-time nurses, one fulltime medical secretary and a part-time team of physicians.

Doctors' clinic hours are Monday through Friday, 10:30 a.m. to noon. Doctors are also on call all other hours when residence halls are open. Refersals to specialists or hospitals are made by the university physicians, and families are notified in case of serious illness or accident. If hospitalization is required, the attending physician makes the arrangements. Information about medical insurance is on page 35 .

When the residence halls are closed, medical needs are the responsibility of the individual student. In emergencies, Public Safety should be called.

## Housing

Residence halls are more than just places to study and sleep; they are communities where students learn to live with people of different values, behaviors and beliefs.

The university offers a variety of housing accommodations for approximately 2,350 students. In addition to 10 traditional, single-sex residence halls, Blaclcwell Hall (for first-year students) and McBee Hall (for upperclass students) house men and women on alternating
floors or wings. In Blacltwell and McBee, visitation regulations are the same as in other residence halls, and the staffs in both buildings are specially trained to offer activities that encourage healthy interaction between men and women.

Other nontraditional housing options for upperclass students include four lakeside cottages, one house near the golf course, and Montague Village, which houses 82 men and women in separate, four-person apartments. North Village houses 852 men and women in separate four-person apartments.

Although there are a few single rooms on campus, most students are housed in double rooms. However, if there is an unexpected space problem at the beginning of an academic year, triple rooms may be needed.

There are some differences in room rates. The base, double-room rate for $1999-2000$ is $\$ 2,584$. Other housing options, such as single rooms and apartments, have annual increases between $\$ 288$ and $\$ 528$, depending on a student's specific housing assignment. Students are responsible for paying the rate that coincides with a specific housing assignment, despite the origin of the assignment.

In traditional residence halls, students are not permitted to visit on the hallways or in the rooms of students of the opposite sex except during supervised visitation hours. Generally, these are scheduled for Sunday through Thursday, noon to midnight; Friday and Saturday, noon to 2 a.m. Students in Montague Village, North Village and other campus apartments follow a self-regulated visitation program.

The University Housing staff communicates with new students about roommates, room assignments and policies. Residence hall regulations and expectations covering care of property, mainte-
nance, safety and social conduct are published in The Helmsman, the student handbook, which is distributed to all students.

All freshmen, sophomores and juniors, except married students or those living at home with a parent, must live in university housing. As a guideline for upholding this policy, freshmen, sopholnores and juniors are defined as students who entered college in the fall of 1997 or later. Transfer students of any classification, except those who are married or living at home with a parent, must live in university housing until they have become fourth-year students.

The $\$ 300$ advance payment fee submitted by prospective resident students guarantees university housing to freshmen, sophomores and juniors because they are required to live on campus. Freshmen, sophomores and juniors are not allowed to register for classes until they pay the $\$ 300$ deposit and are assigned to university housing. In the case of seniors, even though the $\$ 300$ advance payment fee includes a $\$ 100$ room reservation and damage deposit, payment of the fee does not guarantee housing. The deposit is refunded to seniors who pay by March 15 but are not offered housing.

## Student Identification Cards

When students first register, they secure a nontransferable identification card which is used throughout their enrollment and turned in to the Office of Student Services upon withdrawal or graduation. The card entitles students to all university services and programs.

At registration each term, the cards are validated to confirm student status. A charge of $\$ 15$ is made for replacement of identification cards.

## Orientation

To help new students familiarize themselves with what most likely will be a new way of living and to acquaint them with the various facilities and services on the campus, Furman conducts a five-day orientation session. New students move into residence halls on September 7-8 and Orientation programs begin on Wednesday, September 8. Orientation days include academic placement testing and advising, but there are also opportunities for fun. The Office of Student Services coordinates the planning of Orientation.

## Veterans' Affairs

A Veterans' Affairs Coordinator in the Office of Student Services works with eligible veterans and their dependents to certify their standing at Furman.

## Student Conduct Regulations

An institution, like an individual, has a character developed out of its accumulated experience and expressed in its purpose, goals and values. Furman's character is reflected in part in the regulations which govern its students. Elements which have helped shape those regulations include the size of the college, its coeducational status, the diversity of its student body, the liberal arts tradition, and the university's commitment to academic excellence.

Students who enroll at Furman need to understand and accept these boundaries. The university maintains a regulation against the drinking of alcoholic beverages on campus and the possession or use of
illegal drugs. Furman students are required to be honest in their academic work and to obey fire safety and traffic regulations. Other regulations prohibit disorderly assembly or disorderly conduct, vandalism, falsification of records, theft, financial irresponsibility, unauthorized entry and/or unauthorized use of university facilities, possession of firearms and fireworks, and misuse of nontransferable identification cards, registration certificates and meal tickets. Students may keep automobiles on campus provided the vehicles are properly registered and traffic laws are obeyed.

Furman is not a sanctuary where students may escape the responsibilities imposed by law upon all citizens. The university does not condone the violation or attempted violation of federal, state or local laws. Alleged violations may be referred to the appropriate officials and/or the appropriate university official or judicial body.

Regulations governing student conduct at Furman are ultimately the responsibility of the President. Students are expected to follow the rules set forth in this catalogue and in the student handbook, The Helmsman. Violators of university regulations are subject to penalties which range from a reprimand to suspension or expulsion.

Since Furman is a private institution, it reserves the right to refuse re-enrollment to a student whose personal or academic adjustment has been unsatisfactory. Acceptance for one term does not necessarily imply acceptance for succeeding terms. The university reserves the right to amend its rules, policies and procedures at any time.

## Admissions



Students may enter at the beginning of any term or in the summer session, depending on available space. Selection is coinpetitive and based upon the type of courses taken in high school, grades earned, scholastic rank in class, test scores and other personal information. Neither academic record nor ability is of itself sufficient qualification for the adinission of any applicant. The university reserves the right to deny admission to any student who in the judgment of the Admissions Coininittee may not benefit from Furman's educational program or whose presence or conduct inay be detrimental to that program. In its admissions policies and procedures, Furman University will deny admission to no student because of race, color, ethnic origin, sex or creed.

A candidate for undergraduate admission should malce initial contact with the Office of Admissions, Furman University, Greenville, South Carolina 29613, in the junior or senior year of high school. At that time the Admissions Office will mail the necessary forms and instructions.

Furman accepts the Common Application as well as the Universal Application from Peterson's, Expan, Apply! and College Link. All are given equal consideration. A non-refundable processing fee of $\$ 40$ must accoinpany all applications.

## Requirements

With the exception of a few selected early admission students, candidates for admission must have graduated from high school prior to enrollment at Furman.

A strong college preparatory course of study is required. At minimum, it must include four years of English, algebra I and II, geometry, three years of social studies, at least two years of natural sciences, and two years of the same foreign language. Students should have four or more academic credits a year on the advanced or
honors level. Written essays are required as part of the application.

Candidates must complete an application for admission, arrange to have an official transcript sent directly from their high school, and have their official scores on the standard Scholastic Aptitude Test (SATI) or American College Testing (ACT) program sent to the Admissions Office at Furman prior to the application deadline. Applicants are also required to submit a mid-year grade report from their high schools.

In place of the above requirements, home-schooled applicants are required to submit three SAT II exainination scores, including at least one in SAT II English and another in SAT II math. The third SAT II test may be taken in any subject. Furman also requires an outline of topics covered or curriculum for the high school experience.

## Early Decision Plan for Admission

It may be advantageous for a freshman candidate for admission to apply under the Early Decision Plan. Students applying at this time indicate that Furman is their first choice college, and they are informed of the university's admission decision in late December. The university notifies candidates of financial aid awards soon thereafter.

Early Decision admission is coinpetitive, based on high school grades, SAT I or ACT scores, extracurricular activities and a written essay. Early Decision applicants for need-based financial aid should complete, by December 1, the Furman Application for Scholarship and Financial Assistance and the Furman University Financial Aid Assessment Form. Information is available from the Financial Aid Office. Early Decision applications for admission must be postmarked by December 1 .

Early Decision students choosing to enroll at Furman must submit a $\$ 300$ nonrefundable deposit and signed commit-
ment postmarlted by February 1 to reserve class space and a residence hall room for the fall. For commuting students, the deposit is $\$ 200$.

Deferred Early Decision candidates receive strong consideration under the Regular Decision plan. They are required to have their high school submit a transcript of their grades for the first semester of their senior year by February 10. Students may be declined during Early Decision.

## Regular Decision Plan for Admission

Because of the large number of applications under the Regular Decision plan, admission under this plan is very competitive.

Applications under the Regular Decision plan must be postmarked by February 1. Applications received after February 1 are considered as space is available. Space limitations may prevent admission at terms other than fall and summer.

Decisions on candidates for the fall term who have made application on time are mailed on March 15. Candidates for winter and spring terms are notified as soon as possible after the respective deadlines. Furman observes the May 1 Candidate's Reply Date.

Boarding students should submit a nonrefundable fee of $\$ 300$ and signed commitment to enroll, postmarlced by May 1. For commuters, a $\$ 200$ deposit is due by May 1.

## Early Admission

Furman encourages all candidates for admission to complete four years of high school. Occasionally admission is offered to qualified candidates who have completed three years of high school work. Early admission candidates include both early graduates and nongraduates.

Candidates for admission after their junior year of high school are judged on an individual basis by the admissions committee. They should be students of unusual
academic promise and personal maturity. Applicants must be interviewed by a member of the admissions staff and are expected to rank in the top 10 percent of their class, have Scholastic Aptitude Test scores of at least 670 verbal and 600 math, or an ACT score of 29 or higher, and be enthusiastically recommended by their high school principal or guidance counselor.

## Advanced Placement and Joint Enrollment Credit

Students who take Advanced Placement courses in high school may take Advanced Placement examinations, which are normally offered in May through secondary schools rather than through testing centers operated by the Educational Testing Service. When the results of those examinations are submitted, they are evaluated by the appropriate departments at Furman. If a test is scored four or higher (in the case of calculus BC, three or higher) college credit may be given at the discretion of the department chair. If a higher level examination of the International Baccalaureate Program receives a score of six or higher, credit may be awarded at the discretion of the appropriate department chair.

The Associate Dean and University Registrar may assign academic credit for joint enrollment courses when the credits received are beyond those required for admission to Furman or for graduation from high school, provided a minimum grade of $C$ was earned. See page 49 for restrictions.

## Transfer Students

Admission by transfer from other regionally accredited colleges may be arranged. College courses talten and grades earned weigh heavily in the admissions committee's decision, as admission is very competitive.

The application deadline for boarding transfers is May 1.

After approval, the Associate Dean and University Registrar corresponds with the transfer student concerning courses on which credit is being transferred, the minimum number of hours required for graduation and the General Education courses that remain to be completed. The chair of the department in which the student majors indicates the specific courses required in that department.

Credit on courses taken at other colleges approved by the appropriate regional accreditation agency transfers to Furman provided (1) the courses are equivalent to courses offered at Furman, (2) the courses are standard courses in departments corresponding to departments at Furman and are acceptable to the appropriate department chair at Furman and (3) a minimum grade of $C$ was earned on each course.

## Special Students

A special student is a student who already holds a bachelor's degree from a regionally accredited college and is not seeking a degree from Furman University.

Each applicant for admission as a special student is required to submit a transcript of college work, including date of graduation. Admission is based on quality of college work and available space. Special students must reapply for each term in which they wish to enroll.

## Transient Students

A transient student is one who is working for a degree at another accredited college and wishes to earn credit at Furman. A transient student may enroll only during the summer session or in the Division of Continuing Education. Financial aid is not available to transient students.

## Readmission

Following an absence from the university of one or more terms, other than the summer terms, the student who desires to reenter must apply for readmission. The application will be reviewed by the Assistant Dean for Academic Affairs. If approved, the student must meet the requirements for graduation and the minimum academic standards effective at the time of this re-entry.

The deadline for applying for readmission is the same as for Regular Decision candidates. Because of limited space, admission is competitive.

## Information Sessions

Although not required as a part of the admission procedure, an information session and a tour are strongly recommended. It is highly advisable that applicants make appointments in advance for tours and information sessions. Campus tours and visitation programs are scheduled on selected Saturdays.


## Financial Information



## Expenses for 1999-2000

## Application Fee

A nonrefundable application fee of $\$ 40$ must accompany the student's initial application for admission.

## Advance Payment Fee

To reserve a place in the university, all students who plan to enroll, new as well as returning students, must make a nonrefundable advance payment of $\$ 200$. (In addition, resident students must submit the $\$ 100$ room reservation and damage deposit described below.) This payment is not covered by scholarship or
financial aid. It will be credited toward the student's first-term fees.

Entering freshmen or transfer students should make the advance payment immediately upon receipt of the letter of approval of admission. Returning students will make the advance payment by March 15 . The advance payment fee establishes eligibility for incoming freshmen to receive registration materials and for returning students to register.

Deposit
A $\$ 100$ room reservation and damage deposit is required to reserve a place in the residence halls. This deposit is nonrefundable except as specified in the refund

12-Week Term 8-Week Term Per Year $\$ 6,708 \quad \$ 4,472 \quad \$ 17,888$
Tuition (up to 16 and 12 hours, respectively) 969
1,077 646 2,584

1,125 718 2,872
$\begin{array}{lll}1,167 & 778 & 3,112\end{array}$

| Board | Food Points/Term |  |  |  |
| :--- | :---: | :--- | :--- | ---: |
| 19 meals/week | $25 / 25 / 25$ | 849 | 566 | 2,264 |
| 15 meals/week | $115 / 75 / 115$ | 849 | 566 | 2,264 |
| $125 / 80 / 125$ meals/term | $100 / 70 / 100$ | 693 | 462 | 1,848 |
| 7 meals/week | $100 / 70 / 100$ | 519 | 346 | 1,384 |
| 5 meals/week | $50 / 30 / 50$ | 340.50 | 227 | 908 |

Special Fees
Applied music, individual instruction
Two lessons per week - noncredit
One lesson per week - noncredit
396
264
1,056

Applied music, group instruction
Two lessons per week - noncredit
$192 \quad 128$
512
$\begin{array}{ll}\text { Group medical insurance } & 119\end{array}$
Graduation fee (payable at beginning of final term) 75
Lab fee (per course) 40
Late enrollment $100 \quad 100$
Association of Furman Students 66.75
44.50

178
University Center fee 75 50 200
policy on page 33 . Returning resident students will make the payment by March 15. This deposit is not covered by scholarship or financial aid.

## Laboratory Fee

Students in certain courses that require special instructional supplies, materials, or equipment are required to pay a nonrefundable fee of $\$ 40$ per course. The fee is charged as specified in the course listings for Art, Biology, Chemistry, Computer Science, Earth and Environmental Sciences, Health and Exercise Science, Physics, Psychology, and selected courses in Music.

## ROTC Activity Fee

Students enrolled in Military Science courses or labs are required to pay an activity fee of $\$ 25$ once yearly during registration, to defray the costs of field exercises, rappelling trips, ammunition, battlefield tours, cookouts, Paladin Challenge awards, and wear and tear on the textboolts and equipment. The fee entitles currently enrolled students to participate in selected ROTC events throughout the academic year.

## Room and Board Policy

All freshmen, sophomores and juniors, except married students or those living at home with a parent, must live in university housing. As a guideline for upholding this policy, freshmen, sophomores and juniors are defined as students who entered college in the fall of 1997 or later. Transfer students of any classification, except those who are married or living at home with a parent, must live in university housing until they have become fourth-year students.

There are some differences in room rates. The base, double-room rate for $1999-2000$ is $\$ 2,584$. Other housing options, such as single rooms and apartments, cost more depending on a student's
specific housing assignment. Students are responsible for paying the rate that coincides with a specific housing assignment, despite the origin of the assignment.

All students who live in university residence hall rooms without kitchens are required to subscribe to a meal plan. Furman offers five different meal plans. Freshmen are required to choose one of two plans: 19 meals-per-week with 25 Food Points or 15 meals-per-week with 115 Food Points.

In addition to these two plans, sophomores, juniors and seniors who live in residence hall rooms without kitchens and students who live off campus may choose from several other plans. Students living off campus or in auxiliary housing areas with designed coolcing facilities may purchase selected meal plans but are not required to do so.

Sophomores, juniors, seniors and commuters may purchase a 125 -meals-perterm plan with 100 Food Points ( 80 meals with 70 points during winter term). Juniors, seniors and commuters may purchase a 7 meals-per-week plan with 100 Food Points ( 7 meals with 70 points during winter term), or a 5-meals-perweek plan with 50 Food Points ( 5 meals with 30 points during winter term). See the basic fees schedule on page 31.

Food Points offer "points" that may be used on a $\$ 1$ per point basis to purchase any item sold in the dining hall or Pala Den. Food Points, which are stored on the student ID card, expire at the end of each term and are not refundable for cash.

Students in off-campus independent study courses may request a 50 percent reduction in board charges for any period of more than ten days that they are required to be off campus.

## General Fee Policy

Because economic conditions fluctuate, the university reserves the right to change tuition and other charges at the beginning
of any term if such change is judged necessary by the Board of Trustees. During recent years Furman University has incurred higher expenses as a result of tlze general increase in costs. While every effort is being made to keep operating costs low, it is probable that fees for academic years subsequent to 1999-2000 will have to be increased as costs rise.

## Payment of Fees

Fees must be paid in full to complete enrollment. For all students, fees are payable prior to the start of each term as follows:

| By August 27,1999 | $\$ 8,784.75$ | $\$ 6,966.75$ |
| :--- | :--- | :--- |
| By December 10,1999 | $\$ 5,778.50$ | $\$ 4,566.50$ |
| By February 15,2000 | $\$ 8,667.75$ | $\$ 6,849.75$ |

Statements are mailed in August for students who have made the advance payment fee; in November and January for students enrolled in tlze previous terms.

Because some parents prefer to pay college fees by monthly payments, the university offers the Furman Ten-Month Payment Plan. The plan, administered by Key Education Resources, allows for ten equal payments beginning in May prior to enrollment. Pamphlets about the plan are mailed directly to students. Whether through this plan, a local bank, or any other source, arrangements must be completed in time for payments to be received according to the schedule above.

Students must be present on Enrollment Day to complete matriculation. Students who register late will be assessed a $\$ 100$ late registration fee.

Any student leaving the university for any reason without paying all charges in full will be charged 8 percent annual interest from date of withdrawal plus any expenses incurred in collection.

## Comprehensive Fee Policy

Furman lzas initiated a comprehensive tuition fee for all students enrolled for up to 16 credit hours in the fall or spring terms and up to 12 credit hours in the winter term.

Students may request an exception to be charged on a per-course basis by coinpleting an application in the office of the Associate Academic Dean. This should be done at least one week prior to the first day of classes so that, if approved, charges may be adjusted appropriately before the term begins. The following students are eligible to request an exception to the comprehensive tuition fee:

1) Students who are financially independent.
2) Students who have documented financial, medical or learning difficulties.
3) During 1999-2000, students who have earned 96 hours or more toward graduation as of September 1, 1999.

## Refund Policy

Many commitments of the university are based upon the enrollment anticipated at tlze beginning of the term. Registration in the university is considered a contract binding students and their parents for charges for the entire term. However, refunds are granted in certain cases, as follows:

Withdrawal from the University. Students who withdraw from the university may receive a partial refund in accordance with the following schedule. Enrollment Day is considered the first day of classes for the purpose of computing refunds. The date of withdrawal is established by the Vice President for Student Services.

Withdrawal from a Course. Because tuition is assessed on a comprehensive basis, no refunds are issued when a student withdraws from one or more courses while

remaining enrolled in the university. However, a student who wishes to withdraw from a course may apply to the Vice President for Student Services for a prorated refund if the withdrawal is for documented medical reasons. In addition, a student who has been granted an exception from the comprehensive fee structure in a given term will receive a prorated refund for withdrawal from a course.

The schedule below governs the time frames and amounts of proration:

Tuition and Applied Music Fees

|  | I2-Week <br> Term | 8-Week <br> Term |
| :--- | ---: | ---: |
| During first week | $90 \%$ | $90 \%$ |
| During second week | $75 \%$ | $60 \%$ |
| During third week | $50 \%$ | $30 \%$ |
| During fourth week | $25 \%$ | none |
| After fourth week | none | none |

Board. $50 \%$ of the remaining unused portion at any time during a term.

Room. No refund if enrollment has been completed.

University Center Fee. No refund if enrollment has been completed.

Association of Furman Students Fee. No
refund if enrollment has been completed.
Room Reservation and Damage Deposit. Not refundable to students who decide not to enroll as resident students or who withdraw or vacate their rooms for any reason, except graduation, during the school year. Those students who reside in the residence halls throughout the year and have not graduated will have their student accounts credited for the deposit, less any damage or unpaid bills, during the summer following the regular school year. Graduates will be sent a refund check for the net amount.

Students who receive federal financial aid have their refunds determined in accordance with applicable U.S. Department of Education regulations.

Students who are caused to withdraw at any time during a term by required active military service shall receive a refund in accordance with the stated policy. Any of these students who re-enroll within the following five years shall receive a credit against the expense of the first term in an amount equal to fees for the last term enrolled, less the amount of any refund paid at the time of entry into military service.

All questions about refunds or other financial matters should be directed to the Financial Services Office.

## Personal Expenses

Books and Supplies. Students should have money to purchase books and supplies. Freshmen should allow $\$ 600$ to $\$ 700$.

Membership Fees. Students have various organizations that operate on small budgets of their own. Membership in the departmental, honorary and social clubs, which is voluntary, involves nominal fees.

Group Medical Insurance. A group hospitalization, surgical and accident plan is provided by the university for all full-time undergraduate students. The protection, effective 12 months of the year, provides reimbursement for expenses incurred in any hospital and insures students within certain limitations for all nonoccupational illnesses or accidents. Payment of benefits is made regardless of any other insurance carried. The cost is \$119 annually, payable in advance at the beginning of the school year. Each student taking 8 or more credit hours first term will automatically participate in the group insurance plan and will be charged the insurance premium unless a waiver form, signed by a parent or by the student if not a minor, is received by the Financial Services Office by September 1. Information about the coverage is given each student at the start of the school year. The insurance is effective September 1.

Miscellaneous Expenses. Tennis, swimming, boating and many other recreational facilities are available without charge. A small charge is made to students for use of the golf course and indoor tennis courts.

Residence Hall Furnishings. Rooms are furnished with beds, desks, chests of drawers and chairs. Students supply pillows, bed linens, blankets, bedspreads, towels, laundry bags, study lamps and similar items.

Laundry. Coin-operated washing machines and dryers are available in each residence hall.

Residence Hall Fines and Special Fees. Students are expected to preserve good order in buildings and on campus, and to pay damages as determined by the Director of University Housing. A $\$ 25$ charge will be made for moving residence from one room to another without permission.

## Student Aid

Furman provides financial assistance to all qualified applicants. The financial aid program includes a broad range of academic and special talent scholarships as well as a comprehensive need-based program of grants, loans and work opportunities. More than 70 percent of Furman students receive some type of financial assistance.

The Application for Scholarship and Financial Assistance allows students to be considered for all sources of institutional funds except those specified on pages 37-38.

Financial aid is awarded by the Awards Committee to full-time students. Most aid is credited at the rate of $371 / 2$ percent fall term, 25 percent winter term and $37 \frac{1}{2}$ percent spring term.

Regulations from the United States Department of Education state that if federal funding is a part of the student's financial aid award, the total amount of the award may not exceed the financial need as determined by the Free Application for Federal Student Aid (FAFSA). If the student receives scholarships from outside sources, it is the Financial Aid Office's policy to make the appropriate adjustments in the financial aid award to comply with regulations.

Application Deadlines and Procedures
The Application for Scholarship and Financial Assistance is included with the
admissions application and should be completed and returned with the admissions application. The admissions deadline for Early Decision is December 1 and for Regular Decision is February 1.

Early Decision applicants who wish to be considered for need-based assistance should complete the Furman Application for Scholarship and Financial Assistance and the Furman University Financial Aid Assessment Form by December 1. They should also complete the Free Application for Federal Student Aid (FAFSA) as soon as possible after January 1.

Regular Decision applicants who wish to be considered for need-based assistance should complete the FAFSA as soon as possible after January 1 and the Furman Application for Scholarship and Financial Assistance by February 1.

## Renewal of Financial Aid

The Herman W. Lay Scholarships, Founders Scholarships, Honor Scholarships, Furman Scholar Awards and certain other scholarships are automatically renewed as long as the student maintains a cumulative 3.0 grade-point average. For need-based scholarships, grants, loans and work-study, students must apply and file the FAFSA form each year.

For all need-based financial assistance, full-time undergraduate students must have met the minimum academic standards to retain eligibility. (See Page 38.)

## Furrnan Merit Scholarships

Furrnan offers more than 100 renewable merit scholarships for freshmen. They include four Herman W. Lay Scholarships (room, board and tuition), ten Founders Scholarships (full tuition), 30 half-tuition scholarslzips, and 35 quarter-tuition scholarships. These scholarships are awarded on the basis of high school grades, courses, test scores, essay, and extracurricular activities to both Early

Decision and Regular Decision applicants. They are renewable based on maintaining a cumulative 3.0 grade-point average.

Furrnan Scholars
Students are named Furman Scholars by their high schools during their junior year. Furman Scholars who enroll at Furman are guaranteed a $\$ 3,500$ minimum renewable scholarship. Furman Scholars also compete for Lay, Founders, half-tuition and quarter-tuition scholarships which would replace the $\$ 3,500$ award.

## National Merit Scholarships

Renewable scholarships of up to $\$ 2,000$ are offered to National Merit finalists who indicate Furman as their first-choice college.

Scholarships Requiring a Separate Application

The following scholarships must be applied for on separate forms, available in the Financial Aid Office or on the Furman Web (www.furman.edu). The application deadline is February 1.

Alden Pre-Engineering. Renewable, fulltuition scholarship awarded to an entering freshman enrolling in the three-year preengineering program.

Alden Transfer: Two-year, full-tuition scholarship. Graduates from Brevard, Greenville Technical and Spartanburg Methodist colleges, and the two-year programs at North Greenville College receive primary consideration.

Dow Chemistry Company Foundation and Dreyfus Foundation. Renewable scholarships (Dow: \$2,000-\$4,000;Dreyfus: \$1,000-\$1,500) for students planning a career in the chemical industry or planning to pursue a Ph.D. in chemistry.

Liberty. Two renewable scholarships awarded to entering freshmen intending to
major in business, economics or computer science.

Alfred Taylor Odell. For upperclassmen majoring in one of the departments of the humanities: classics, English, history, modern languages and literatures, philosophy, and religion.

Furman Teacher Education. Three \$2,000 renewable scholarships awarded annually to entering freshmen who indicate teaching as their career goal.

Wylie Math. Renewable scholarships awarded on a competitive basis to entering freshinen with outstanding mathematical ability and a combined SAT score of at least 1350.

Study Abroad. For upperclassmen participating in a Furman-sponsored study abroad trip.

## Special Scholarships

Music Scholarships. Competitive scholarships awarded on the basis of auditions held in December and January. For details, contact the Department of Music.

Art Scholarships. Competitive scholarships awarded on the basis of portfolio submissions. Prospective students must submit portfolios to the head of the Department of Art by December 1 (Early Decision) or February 1 (Regular Decision). For details, contact the Department of Art.

Athletic Scholarships. Partial to full scholarships awarded in 17 men's and women's intercollegiate sports. For details, contact the vice president for intercollegiate athletics or the head coach in a particular sport.

Reserve Officers' Training Corps Scholar* ships (ROTC). Army ROTC scholarships are available to selected students for three or four years. Recipients, selected by university officials and the Department of the Army, take military science courses each term. Upon graduation they receive a commission in the U.S. Army, Army Reserve or National Guard. The scholar-
ships are for up to $\$ 16,000$ plus a $\$ 150$-permonth stipend during the school year. Recipients of four-year scholarships may qualify for an additional Furman scholarship. For more information, contact the Department of Military Science.

Ministerial Aid. Properly accredited fulltime students preparing for the ministry or foreign mission field, except those whose entire expenses are otherwise provided, may apply for ministerial aid, not to exceed 20 percent of the tuition due each term.

Students receiving such aid must maintain their commitment to a churchrelated vocation. Students must re-apply each year and be approved by the university chaplains for continuation of aid. For details, contact the Chaplains Office.

Ministers' Dependents. Full-time students who are dependent sons or daughters of Baptist ministers are eligible for a scholarship of 15 percent of the tuition due each term.

Kittie Moss Fairey Scholarship Fund. Established by the late Mrs. Fairey to aid worthy entering freshman students attending South Carolina institutions, the award is equal to half the cost of room, board and tuition. For details, write Wachovia, Kittie M. Fairey Scholarship Fund, Trust Department, Columbia, S.C. 29202.
C. G. Fuller Scholarship Fund. Established by Mr. Fuller to assist deserving students from South Carolina attending schools within the state, the award is based on academic merit and financial need. For details, write C.G. Fuller Foundation, c/o NationsBank N.A., S.C. 3-240-04-17, P.O. Box 448, Columbia, S.C. 29202-0448.
J.E. Sirrine Scholarship Fund. The J.E. Sirrine Scholarship Program was established by the late Joseph Emory Sirrine, who left the bulk of his estate as a memorial to his father and mother, to assist deserving graduates of Greenville County public high schools to further their education. For details, write Sirrine Scholarship

Program, P.O. Box 2848 , Greenville, S.C. 29602. Application deadline is March 15.

Gmduate Scholarships. Graduate fellowships and assistantships are available in the Department of Chemistry. Recipients render service in the department and are generally not allowed to carry a full program of graduate work. Inquiries about these awards should be made to the Director of Graduate Studies.

Valuable scholarships and fellowships to attend other universities are frequently won by graduates of Furman. Those interested in such assistance should confer with the Director of Educational Services.

## South Carolina Merit-Based Scholarships

These state merit-based scholarships are awarded without regard to financial need.

South Carolina LIFE scholarships are $\$ 2,000$ awards for students from the state who graduate with a 3.0 grade-point average in high school and score 1,000 or more on the SAT. The awards are renewable with a 3.0 cumulative gradepoint average and completion of at least 30 hours annually. No application is required. Recipients must be enrolled full-time each term.

Palmetto Fellows awards are \$5,000 academic grants to students from South Carolina based on annual guidelines, currently a 3.5 grade-point average in high school, 1,200 SAT score and rank in the top 5 percent of the high school class. Eligible candidates may apply through their high school guidance office in the fall of their senior year. Recipients must be enrolled full-time each term.

Students may not receive both the Palmetto Fellows and the South Carolina LIFE scholarships.

Appeal information is available from the South Carolina Commission on Higher Education.

Need-Based Financial Assistance
To be considered for any need-based financial assistance, students must complete the Free Application for Federal Student Aid (FAFSA). For information regarding the status of a FAFSA application, call 1-800-4-FEDAID.

Federal Pell Grants range from $\$ 400$ to $\$ 3,125$.

Federal Supplemental Educational Opportunity Grants are additional funds up to $\$ 4,000$ for students who qualify for a Pell Grant.

Federal Work-Study underwrites work on and off campus for students who qualify. Students may work at a variety of campus jobs at no less than minimum wage.

Federal Perkins Student Loans range up to $\$ 4,000$. Students have a grace period of nine months after they graduate, leave school or fall below half-time status before they must begin repayment. The annual interest rate is 5 percent.

Stafford Student Loans (subsidized) are worth up to $\$ 2,625$ for the freshman year, $\$ 3,500$ for the sophomore year, and $\$ 5,500$ for the junior and senior years for eligible students. Students have a grace period of six months after they graduate, leave school or fall below half-time status before they must begin repayment. Interest is a variable rate not to exceed 8.25 percent.

Students who do not demonstrate financial need may still borrow an unsubsidized loan for which they would be responsible for interest payments while they are in school. The Financial Aid Office will electronically process students' Stafford Loan through the South Carolina Student Loan Corporation. No separate application is required.

South Carolina Tuition Grants enable many state residents to attend private colleges within the state. Students whose family income is under $\$ 90,000$ and who
have been legal residents of the state for at least one year prior to the entrance date (September 1) may qualify for awards ranging up to $\$ 3,730$. For maximum eligibility, students must be enrolled fulltime. For students to qualify, the FAFSA must be filed by June 15 .

## Alternative Financing

## Furman Ten-Month Payment Plan.

 Administered by Key Education Resources of Boston, Mass., this plan provides for ten equal payments beginning in May prior to enrollment. Applications are mailed directly to students after they have been approved for admission.Parent Loan (PLUS). A federal program of loan assistance regardless of family income. Parents or qualified students may borrow as much as the difference between the cost of education and the amount of financial aid. The interest rate varies but does not exceed 9 percent. Repayment begins 45 to 60 days after final disbursement. Applications are available through the Furman Financial Aid Office.

Key Education Resources Achiever Loan. This flexible parent loan program offers three financial options and features a simple application process, low interest rates and low loan fees. For information, call 1-800-KEYLEND or write Key Education Resources, 745 Atlantic Avenue, Boston, Mass. 02111.

Pickett $\mathcal{E}$ Hatcher Educational Funds. Annual loans of \$3,000 to students who are residents of the Southeastern states, based on financial resources and projected college costs. Simple interest is charged at an annual rate of 2 percent while a full-time student, 6 percent thereafter. Application deadline is May 15. Contact Pickett \& Hatcher, P.O. Box 8169, Columbus, Ga. 31908-8169.

South Carolina Teacher Loan Program. Available to South Carolina residents enrolled or accepted in the university's teacher education program. Financial need is not a consideration, and the loans are canceled at the rate of 20 percent for each year recipients teach a critical subject or teach in a critical geographic area in the state. If a student teaches a critical subject in a critical geographic area, the loans are canceled at a rate of 33 percent yearly.

To qualify, entering freshmen must have been ranked in the top 40 percent of their high school graduating class and have an SAT or ACT score equal to or greater than the South Carolina average for the year they graduated from high school or the most recent year for which such figures are available. (For 1998-99, the averages were 951 SAT, 19 ACT.) Enrolled undergraduate students, including enrolled freshmen, must have taken and passed the Praxis I Exam and have a cumulative grade-point average of at least 2.75 on a scale of 4.0.

## Academic Regulations



From time to time changes are made in General Education requirements, graduation requirements and related matters. Unless otherwise indicated, such changes will be applicable to all students enrolled at the time the change is adopted as well as to all students who re-enroll after a period of absence.

A student may petition the Faculty Appeals Committee for an exception to academic requirements and regulations as set forth in the catalogue or as approved by the faculty. The student should present the appeal in writing to the Associate Academic Dean. Students may appeal the decisions of the Appeals Committee to the Vice President for Academic Affairs.

## Degree Requirements

References to hours are to semester hours.

## Competencies for Graduation

All candidates for the baccalaureate degree must be competent in reading with comprehension, communicating intelligibly both in speech and in writing, and solving problems which require fundamental critical and analytical skills. The core curriculum, various senior seminars, independent study opportunities and requirements, and a strong program of undergraduate research offer unusual opportunities for students to acquire these competencies.

## Master's Degrees

See page 137

## Bachelor's Degrees

To earn a bachelor's degree, a student must meet the following requirements:

1. Credit for a minimum of 128 semester hours. At least 60 hours must be earned at Furman. These must include the last 28 hours and 20 hours in the major.
2. A grade-point average of at least 2.0 on all course work completed at Furman.

In addition, certain departments may require a 2.0 grade-point average for all courses taken in the major. Major requirements for each department are given in the chapter on Courses of Instruction, pages 53-135.
3. The General Education requirements (below).
4. The Asian-African requirement (below).
5. The Cultural Life Program requirement (below).
6. A six-to-eleven course major for the Bachelor of Arts or the Bachelor of Science degree and a thirteen-tonineteen course major for the Bachelor of Music degree.
Since the requirements for earning any bachelor's degree include gaining credit for a minimum of 128 semester hours, a student can receive only one such degree upon completion of those hours. Upon application for graduation, students who meet the requirements for more than one type of bachelor's degree must inform the Registrar's Office which degree is being selected.

For a list of major subjects leading to the Bachelor of Arts and Bachelor of Science degrees, see page 10.

The Bachelor of Science or Bachelor of Arts degree will also be conferred on a student in a professional school (medicine, dentistry, engineering, industrial management, pharmacy, physical therapy, physician assistant, and nursing) who began college study at Furman and who meets the following conditions:

1. A minimum of 96 hours earned at Furman and a grade-point average of 2.0 on all hours attempted at Furman, including General Education requirements; a minimum of 24 hours in a major field, as approved by the major department.
2. Submission of evidence that the student has successfully completed the work of the first year for a degree in medicine, dentistry, or optometry in an
accredited medical, dental or optometry school; or successfully completed one year's work in an approved dual-degree program; or successfully completed two years of study in pharmacy, physical therapy, physician assistant or nursing. Such students are eligible for honors at graduation. See page 48 .

## General Education

The purpose of general education at Furman University is to provide students the opportunity to acquire the skills, the experiences and the knowledge needed to achieve broad philosophical, historical, aesthetic and scientific bases for understanding and judging human experience, in the hope that they will enjoy lives characterized by broad vision, selflcnowledge, independent action, tolerance and concern for others.

As means to that end, the university requires of all students a set of courses designed (1) to develop skills in thinking and communicating clearly and effectively; (2) to develop a basic knowledge and understanding of the physical universe, of society and of themselves, as well as a critical appreciation of the ways such lcnowledge is acquired; (3) to develop a knowledge of other cultures and other times; (4) to develop an awareness of the moral, aesthetic and spiritual issues inherent in life and society; (5) to develop the habit of searching for relationships among the various forms of human thought and feeling; and (6) to develop an awareness of the intrinsic value of thought and learning. Instructional means of achieving these goals include various modes of inquiry such as research, scientific observation and survey techniques.

The requirements below are applicable to all students. (Note that it is not permitted for a course to meet more than one General Education requirement.)

For the Bachelor of Arts degree:
Five courses in humanities
English 11
Either of the following groups of three courses: (1) History 11, Religion 11 or 12, and one course from English 12, 21, 22; French 31, 32; German 31, 32; Spanish 31, 32, 37; Classics 32, 33 ; Modern Languages and Literatures A34, A38; Theatre Arts 32, 33; or (2)
Humanities 11, 12 and 13. (Credit cannot be earned for both Religion 11 and 12.)
An additional course numbered 20 or above in Classics, English, History, Modern Languages and Literatures, Philosophy or Religion; or Theatre Arts 34 or 35 ; or both Humanities 19 and 20. [This course cannot be (a) in the major subject, (b) used to meet the foreign language requirement, (c) an independent study or research course or internship (numbered $80,83,85$ or 86 ), (d) a special topics course (numbered 95), or (e) any of the following: English 31, 32, 33, 34, 35; French 25, 40, 49; German 23, 25, 40, 49; Linguistics 21, 51; Modern Languages and Literatures 28; Modern Foreign Languages 64, 65, 74 ; or Spanish $25,40,49$.] This requirement does not apply to students who are double majors when at least one of their majors is in Asian Studies, Classics, English, History, Modem Languages and Literatures, Philosophy, or Religion.

One to three courses in foreign languages Students must take one to three courses in a given language $(21 ; 12 \mathrm{Y}$ and 21 ; or 11 , 12 and 21 ) OR one course beyond the 21 level, as determined by placement tests. For students whose second language is English, it may be possible to substitute English 11 and 21 or 22 plus a course in American literature/culture/civilization. The Associate Dean and University Registrar and the chairs of the English,

Classics, and Modern Languages and Literatures departments must approve the substitution.

One to three courses in mathematics
Mathematics 11 or 11 S or 15 or 16 or 17 , or the sequence $10,11 \mathrm{~S}$, or the sequence 31, 32 and 33. (Education majors must talte the latter sequence.) Credit cannot be earned for both Mathematics 11 and 17 .

## Two courses in natural sciences

Any two of the following: Biology 11, 16, or 17 (but not more than one of these);
Chemistry 11, 12, 16; Earth and Environmental Sciences 11, 16, 18, 21;
Physics 11, 12, 14, 15, 17; Science 16, 17. Science 16 and 17 must both be completed or no General Education credit is earned for either course. (Students planning to enter teacher education must talce both a biological and a physical science. Both must include laboratory experiences.)

## Two courses in social sciences

Any two of the following: Economics 11; Education 20; Political Science 11, 12; Psychology 21, 23; Sociology 21, 24; Anthropology 22, 23. (Credit cannot be earned for both Education 20 and Psychology 23.)
One course in fine arts
Any of the following: Art 26, Theatre Arts 11, Interdisciplinary Studies 30, Music 20. (Qualified students may take four hours of music theory to satisfy this requirement.)

One course in health and exercise science Health and Exercise Science 10

For the Bachelor of Science degree, the General Education requirements are the same except that Mathematics 11 or $11 S$ is required and the natural sciences requirement must be met in courses numbered 11,12 or 21 .

For the Bachelor of Music degree, there is no mathematics and only one natural
sciences requirement, except for the major in music education, for which all the General Education requirements for the Bachelor of Arts must be met.

## Asian-African Program

Each student must take at least one course from the Asian-African program in order to graduate. See page 57. The course may be taken in the major, to satisfy a General Education requirement or independently of the major and General Education requirements. It may not be taken pass/fail.

## Cultural Life Program (CLP)

Each student must complete the Cultural Life Program to graduate. There will be no substitutions or alternatives. Each student must attend a total number of CLP events equal to three times the number of regular terms (fall, winter, spring) enrolled at Furman. (For example, for a student enrolled all four years, the number of required events would be 36 ; a transfer student who is at Furman two full years would be required to acquire 18 CLP units; etc.)

Each student is required to attend CLP events on a timely schedule, since registration priority depends not only on classification but on the number of CLP events attended as of the end of the previous term. Seniors, juniors and sophomores who have attended fewer than nine CLP events must register with the freshinan class; seniors and juniors who have attended at least nine but fewer than 18 CLP events must register with the sophomore class; and seniors who have attended at least 18 but fewer than 27 CLP events must register with the junior class.

Approved CLP events are announced at the beginning of each month. Students are given a data card to complete and turn in at the end of each event they attend. These are tabulated and a cumulative report of the total number of CLP events attended is made part of the term grade report and the academic work card. Students who participate in any Furman-
sponsored study abroad program or the Washington Term receive credit for 9 CLP events.

## Maior Subiect

Each student must officially declare a major before the completion of 70 semester hours.""" For the Bachelor of Arts and Bachelor of Science degrees a major consists of six to eleven courses in one department. For the Bachelor of Music degree a major consists of thirteen to nineteen courses.

Credit toward the major is not normally allowed for a course numbered below 20. Unless departmental policy dictates otherwise, courses taken to fill General Education requirements do not count toward the major. No more than three courses in the major will be directed independent study or research. The content of courses numbered other than 80 may not be offered as independent study. Experiential learning courses taken pass/fail shall not be used to satisfy a requirement for the major.

A department may require that a student take a one-course major seminar in the senior year. A department may require that a student take a comprehensive examination in the major.

Individualized Curriculum Program Students who have educational goals for a major which they feel can best be met by an interdisciplinary program of study may propose an individualized curriculum program. If the proposal is approved by the Individualized Curriculum Program committee, the student then carries out the program under the supervision of this committee and the student's advisor. In preparing the program, a student should keep in mind the following:

1. The program should be positively and clearly thought out to contain
thematically related courses that will meet worthy educational goals of the student.
2. In keeping with the broad educational purposes of Furman University as a liberal arts college, the student will still be expected to complete the General Education, Asian-African, and Cultural Life Program requirements, as well as the 128-hour requirement for graduation. The proposed ICP major should also be consistent with Furman's liberal arts philosophy.
3. The ICP program is not to be used merely to concentrate work in a narrowly preprofessional way or to avoid difficult courses in regular major programs.
4. The student should plan the program from among courses offered at Furman or courses at other colleges approved by the committee. Generally, it will be to a student's advantage to apply to the program by the spring of the sophomore year or the fall of the junior year. As soon as possible, students interested in the program should consult the Associate Academic Dean in order to be notified of the guidelines and deadlines for proposal submission.

## General Academic Regulations

## Classification

Students are officially classified when grade reports are printed and mailed. The student's classification, printed on the grade report, applies for the entire following regular term except when incomplete or nonreported grades are updated or when additional transfer credit is accepted. Students who have credit for fewer than 28 hours as of the end of the previous term are classified as freshmen; those with credit for at least 28 hours as sophomores; those with credit for at least 58 hours as juniors; and those with credit for at least 88 hours as seniors. Registration priority depends in

[^0]part on a student's classification; normally, seniors register first, then juniors, and so on. (See page 43 for the relationship of the Cultural Life Program to registration priority.)

## Status

Full-Time Students. Full-time students are those who are registered for a minimum of three-fourths of the normal load for the year. The normal load for the academic year is 32 hours; for fall and spring terms, 12 hours; for winter term, 8 hours.

## Registration and Enrollment

Registration priority depends on a student's classification (see above) and on timely progress toward completion of the Cultural Life Program requirement (see page 43 ).

Students must complete registration and enrollment procedures in person at the assigned times. Registration and enrollment include academic advising and selection of courses. Before registration, students should consult with their academic advisor on course selection, General Education requirements, major requirements and other requirements. However, it is the final responsibility of the student, not the academic advisor, to ensure that all university graduation requirements are satisfied. Each student is responsible for enrolling properly in each course. Payment of fees should occur before Enrollment Day.

Students may not be enrolled at Furman and another college or university during the same term.

No student may enroll later than the fifth day of classes in the fall and spring

terms, nor later than the third day of the winter term. A fee of $\$ 100$ will be charged for late enrollment (any time after the scheduled Enrollment Day). Absences caused by late entrance into a course will count in the student's attendance record.

## Tutorial Courses

To take a regular catalogue course as a tutorial, a student must first receive permission from the department and then register for the course under its usual catalogue number and title.

## Class Attendance

Instructors are expected to establish and announce attendance requirements for their courses. Unless an instructor announces otherwise, the following guidelines are assumed to be in effect:

A student who has earned fewer than 30 hours will be automatically dropped from a course if absent (for any reason) 15 percent of the class meetings. A student who has earned credit on a minimum of 30 hours will be dropped from a course if absent 25 percent of the class meetings. In both cases, a grade of F will be recorded unless the absences were due to providential reasons, in which cases a grade of W may be assigned after consultation with the Associate Academic Dean.

## Academic Honor

In their examinations, homework, laboratory work and written papers, students are expected to perform with honor. If they are uncertain about what constitutes plagiarism or any other form of academic dishonesty, it is their obligation to consult their teachers so they fully understand what is expected. Academic dishonesty is subject to severe penalties.

## Grades

The grading system is as follows:
A (Excellent) is the mark of highest
distinction earned by those students whose work represents the best that can be expected of a student at Furman.
B (Good) is the mark of distinction earned by those students whose work represents a high degree of achievement in meeting the characteristic demands of the course.
$C$ (Satisfactory) is the mark earned by those students who have attained such familiarity with the content of the course and such ability to apply this knowledge as may be expected of a student who gives to the course a reasonable amount of time, effort, and attention.
D (Marginal) is the lowest passing grade and represents inferior work. It indicates that the student would be seriously handicapped in attempting subsequent courses for which this work is a prerequisite.
F (Failure) indicates unconditional failure.
I (Incomplete) signifies that the work of the course has not been completed or the examination has been deferred because of illness or some other cause beyond the control of the student. W (Withdrew).

For a course taken on a pass/fail basis, a grade of P indicates an $\mathrm{A}, \mathrm{B}$ or $\mathrm{C} ; \mathrm{PD}$ indicates a D ; NP indicates an F .

For a noncredit course, $S$ indicates satisfactory; U indicates unsatisfactoiy.

A grade of $I$ is to be assigned only when the professor is convinced that a student has been unavoidably prevented from completing the required work in a course. An I must be changed and the change reported by the professor to the Associate Dean and University Registrar no later than the middle of the term following the term in which the I was assigned. The only exceptions are independent study or research courses. For those courses, the grade of I must be changed before the middle of the second term following the
term in which the I was assigned. If an I is not changed by the time indicated, it automatically becomes an F .

A student who has a question concerning a grade should discuss the matter with the instructor as soon as possible. If after such consultation the student believes that the assigned grade resulted from error or malfeasance, the grade may be formally appealed under procedures published in the Faculty Handbook. Copies of these procedures are available from the instructor or the Associate Academic Dean.

## Grade-Point Average

When assigning final grades, faculty may utilize plus and minus grades. All grades correspond to quality point values that determine a student's grade-point average. For each hour attempted, letter grades earn quality points as follows:

```
\(A+=4.0 \quad B-=2.7 \quad D+=1.3\)
\(\mathrm{A}=4.0 \quad \mathrm{C}+=2.3 \quad \mathrm{D}=1.0\)
\(\mathrm{A}-=3.7 \quad \mathrm{C}=2.0 \quad \mathrm{D}-=0.7\)
\(\mathrm{B}+=3.3 \quad \mathrm{C}-=1.7 \quad \mathrm{~F}=0\)
\(B=3.0\)
```

The grade-point average is computed by dividing the total quality credits on work attempted at Furman by the number of hours attempted, except for courses with grades of $\mathrm{W}, \mathrm{I}, \mathrm{NR}, \mathrm{P}, \mathrm{PD}$ or NP.

## Minimum Academic Standards

To remain enrolled in good standing, at each of the following stages a student must have earned the minimum grade-point average indicated:
\(\left.$$
\begin{array}{cc}\begin{array}{c}\text { Each term in } \\
\text { which cumulative } \\
\text { hours attempted are } \\
12 \text { or fewer }\end{array} & \begin{array}{c}\text { Minimum } \\
\text { grade-point } \\
\text { average }\end{array}
$$ <br>

1.33\end{array}\right]\)| Initial term in | Minimum |
| :---: | :---: |
| which cumulative | grade-point |
| hours attempted are | average |
| $13-19$ | 1.40 |
| $20-30$ | 1.50 |
| $31-40$ | 1.62 |
| $41-46$ | 1.70 |
| $47-57$ | 1.75 |
| $58-68$ | 1.80 |
| $69-77$ | 1.90 |
| $78-88$ | 1.95 |
| $89-99$ | 2.00 |

Beginning with 100 hours attempted, students will be checked at the end of each term regardless of the number of enrolled hours. Students who do not have a 2.0 cumulative average will be placed on academic probation.

Hours attempted include all work at Furman plus all hours transferred to Furman. Hours transferred to Furman are not used in compiling grade-point averages, however.

A student who fails to meet these standards falls under academic probation. Note that the grade-point average is checked every term until the student has more than 12 cumulative hours attempted; between 13 and 99 hours, it is checked only the first term (including summer sessions) in which the number of cumulative hours attempted falls in each specified range; beginning with 100 hours, it is again checked every term.

A student who fails to meet the above standards three consecutive times (at
three consecutive check points, including summer sessions) will be suspended from Furman. The student may not enroll again at Furman until two regular terms have elapsed. To re-enroll, the student must apply through the Office of the Assistant Academic Dean for Undergraduate Research and Internships.

Any student suspended for incurring a third successive term of probation may, if academic circumstances warrant such consideration, petition the Appeals Committee to set aside the suspension. The committee will consider each request on its merits, based on what the committee believes to be the student's probability of ultimate academic success. Among the factors a petitioning student may cite (if applicable) in support of the request are: a grade-point average of at least 2.0 during the most recent term or terms of enrollment; a cumulative gradepoint average within .10 of that required under the regulations at the end of the most recent term of enrollment; evidence that poor academic performance resulted from extra-academic factors no longer applicable or from an unwise curriculum choice which has subsequently been corrected.

A student readmitted after suspension or one whose suspension has been set aside by the Appeals Committee who falls under academic probation an additional two successive times will be dismissed from Furman University. Such a student may appeal the dismissal in the same manner in which a suspended student may appeal. If a student who has been dismissed wishes to return, that student must apply to the Appeals Committee.

## Repeating Courses

A student in a degree program at Furman may not repeat for credit a course for which a passing grade has previously been awarded at Furman.

## Dean's List

Full-time candidates for an undergraduate degree who have a minimum grade-point average of 3.4 on courses during any regular term are placed on the Dean's List at the end of that term. To qualify, students must enroll in and complete at least 8 semester hours for a grade in fall and spring terms and at least 6 semester hours for a grade in winter term. Students with incomplete grade reports do not qualify.

## Honors at Graduation

To be eligible for honors at graduation, a student must have earned at least 64 hours' credit at Furman, including the last 28 hours. To graduate summa cum laude, the student must have a grade-point average of 3.9 on courses attempted at Furman; to graduate magna cum laude, 3.65; to graduate cum laude, 3.4.

## Examinations

All classes are given examinations at the close of each term. Exceptions must be approved by the appropriate department chair and the Associate Academic Dean. Any instructor who wishes to administer the final examination at a time other than the one specified on the official examination schedule must secure the approval of the department chair and the Associate Academic Dean.

Students are expected to take examinations when officially scheduled. Exceptions, which must be approved by the Associate Academic Dean, are granted only in cases of extenuating circumstances. Exceptions are normally not granted for reasons related to family or personal travel.

## Grade Reports

Within 48 hours after each examination, excluding Sundays, professors will report term grades for each student to the Registrar's Office. For all students, a report
of grades is mailed at the end of each term to the one person the student designates. For South Carolina freshmen a report of grades is mailed to their high schools at the end of the fall term.

## Transfer Credit

A student may transfer credit to Furman from another regionally accredited college for courses that are applicable to a Furman degree, and for which a minimum grade of C - is recorded.

A student can transfer a maximum of 64 semester hours from a two-year college. After having earned 64 semester hours of credit, students can no longer transfer any credit from a two-year college.

Students who intend to transfer credit for courses taken during the summer before their senior year or anytime during their senior year should remember that their last 28 hours of college work must be at Furman. See page 41.

In order for a Furman student to receive credit for a course taken at another institution, the appropriate department chair(s) and the Registrar's Office must approve the course in advance. The necessary forms may be obtained in the Registrar's Office. Students under academic probation cannot transfer credits into Furman and students cannot transfer credit from another college for a course on which an F has been made at Furman.

## Joint Enrollment Courses

The Associate Dean and University Registrar may assign academic credit for joint enrollment courses when the credits received are beyond those required for admission to Furman or for graduation from high school, provided a minimum grade of C was earned. Credit will not be given for courses taught away from the college campus or for courses in which the vast majority of the students are high school students. Credit will not be given for television courses. In cases where joint
enrollment courses are used to prepare for Advanced Placement examinations, the awarding of credit will depend on performance in these examinations.

## Auditors

A student enrolled as a degree candidate or a special student who wishes to audit a course may do so by registering as an auditor and paying one-half the tuition for the course. (Students who pay the comprehensive tuition fee may not have to pay additional tuition to audit a course, depending on the number of hours they are taking for credit. For more information, see the Bursar.)

The latest a student can register to audit a course is during the first five days of fall and spring terms and the first three days of winter term. Persons over 21 years of age not enrolled at Furman may audit classes upon approval by the Associate Dean and University Registrar and payment of the appropriate fee.

## Transcripts of Student Records

Requests for copies of a student's record should be made to the Office of the Registrar and be accompanied by a remittance of $\$ 4$ per copy. All transcripts reflect the student's complete academic record. No transcripts will be issued without the written authorization of the student. None will be issued for a student who has a financial obligation to the university.

## Withdrawal from Course(s)

After conferring with the professor and academic advisor, a student may withdraw from a course without a grade during the drop/add period, which consists of the first five days of classes in the fall and spring terms and the first three days of classes in winter term. If a student withdraws from a course between the end of the drop/add period and the middle of the term, a grade of W will be recorded. For first-year freshmen and
first-year transfer students, this deadline will be extended to two weelts after the middle of the fall term and one week after the middle of the winter term. Thereafter, a student may not withdraw from a course without special permission from the Associate Academic Dean. Such permission will ordinarily not be granted except for reasons of illness, injury or other emergencies that necessitate extended absence from class.

## Leave of Absence

A leave of absence may be granted for one term. A request for a leave of absence is made to the Assistant Academic Dean for Undergraduate Research and Internships prior to the term for which the absence is requested. All forms for financial aid must be completed and all deposits for housing and class reservations must be paid on the schedule required for all students by the university.

## Withdrawal from the University

Withdrawal from the university is facilitated through an exit interview in the Office of Student Services. The interview is required whether a student withdraws during a term or after the term has been completed.

If a student withdraws from the university after the deadline for withdrawal from courses, grades will normally be assigned as follows: W in those courses in which grades were passing at the date of withdrawal, F in those courses in which grades were failing at the date of withdrawal. Should withdrawal be necessitated by serious illness, injury or similar emergencies, the student may be allowed to withdraw with all W grades at the discretion of the Vice President for Student Services and/or the Associate Academic Dean. See page 33.

## Special Academic Regulations

## Credit by Examination

With the approval of the professor who will administer the examination, the chair of the department in which the course is offered and the Associate Academic Dean, any officially enrolled student may earn credit for a course by demonstrating mastery by examination. There are certain exceptions: a student may not challenge an independent study or independent research course or any course for which previously registered either for credit or as an auditor. Moreover, a challenge course may not be taken pass/fail. Whenever possible, the student should consult the professor far enough in advance of the term in which the examination will be talten to determine course requirements and standards and to begin to make independent preparations. However, the student should expect no assistance from the professor other than being informed of the material to be covered on the examination. Under no circumstances shall a student be allowed to attend classes of the course being challenged.

During the registration period for the term in which a course will be challenged, the student should secure the necessary form from the Registrar's Office and pay a registration-examination fee of $\$ 100$. Students who pay the comprehensive tuition fee are exempt from the $\$ 100$ fee if the course falls within the hours provided for by the comprehensive fee.

The examination must be taken before the end of the term in which the student registers to take it. The grade earned for the examination will appear on the student's official academic record.

## Pass/Fail Elective Courses

A student may talte up to 12 hours of electives on a pass/fail basis. Students on
academic probation may not exercise this option nor may students who have ever reached the status of academic suspension.

No course taken to satisfy a General Education requirement may be talten on a pass/fail basis and no course taken on a pass/fail basis may later be used to satisfy a General Education requirement. No course in a student's major department may be talten on a pass/fail basis except for experiential learning courses numbered $80,83,85$ or 86 which the department has chosen to offer on that basis. Such courses do count toward the 12 -hour total limit of courses that may be taken pass/fail.

The pass/fail option encourages students to enrich their education in subjects where they may feel unable to maintain the desired grade-point average. To enroll in a course on a pass/fail basis, the student must state the intention in the Registrar's Office no later than the fifth day of classes during fall or spring terms or the third day of classes during winter term. The student cannot alter that status after those deadlines. Students participating in Furman study abroad programs should declare their intention to the Registrar's Office before departure or contact the office by telephone, fax or E-mail during the designated pass/fail time frame.

If a student officially withdraws from a pass/fail course, the student does not use up that portion of the allotted pass/fail hours. However, once having completed a course on the pass/fail basis, the student does use up that portion of the allotted pass/fail hours.

Since faculty members do not know which students have elected the pass/fail
option, they assign a regular letter grade at the end of the term which is then recorded as follows: P is recorded for regular grades of $\mathrm{A}+$ through $\mathrm{C}-; \mathrm{PD}$ for regular grades of $\mathrm{D}+, \mathrm{D}$ and $\mathrm{D}-$; and NP for the regular grade of F . The grades of P or PD or NP do not influence a student's gradepoint average.

Students may change a pass/fail grade to a regular letter grade if they make the request for change of grade in the Registrar's Office before Enrollment Day of the next regular term.

## Overload

A student who has a minimum cumulative grade-point average of 2.0 during terms in which the last 32 hours at Furman were attempted may enroll in a maximum of 14 hours in the fall and spring terms and a maximum of 10 hours in the winter term. A student who has a minimum cumulative grade-point average of 3.0 during terms in which the last 32 hours at Furman were attempted may enroll in a maximum of 18 hours in the fall and spring terms and a maximum of 12 hours in the winter term.

## Extension or Correspondence Courses

Ordinarily no credit is granted for extension or correspondence courses. In exceptional cases approved by the Associate Dean and University Registrar, however, credit for a maximum of 8 hours may be granted toward a Furman degree. Such credit is not granted in the major field or in General Education requirements.

## Courses of Instruction



## Explanation of Symbols

Course numbers have the following meanings:
10-29 Normally freshinan and sophomore courses, most of which are General Education Requirements or introductory courses in major programs
30-69 Normally junior and senior courses in major programs
60-69 Teaching methods courses; not counted toward the major in any department except education unless otherwise indicated by the department
70 A $n$ integrative seminar relating the field of the major to other fields; or teaching internship courses
75-79 Senior major seminars
80 Independent study course

83 Individualized internship
85 Research course
86 Departmental internship
95 Special topics
100 Courses for graduate students

Some departments have adopted a topical organizationfor courses numbered 20 and above. Students should consult the chair of the department if they have questions about the sequencing of courses in a particular program.
The prefix A indicates a course in AsianAfrican studies; the prefix P indicates a course that may only be taken pass/fail.

The numbers in parentheses following course titles indicate the number of semester hours' credit.

The university does not obligate itself to give any course for which there is not sufficient registration,


## Art

Professor: Sorensen
Associate Professors: Chance (Chair), Watson
Assistant Professors: Bright, McClain
Art 26 satisfies the General Education requirement in fine arts.
Art A37 and A47 satisfy the General Education requirement in Asian/African studies.

## Majors

To graduate with a major in art, a student must have at least a 2.0 grade-point average in all art courses.

All majors must take Art 26 or IDS 30 (26 is preferred). Students who plan an emphasis in studio arts should talce Art 21, $22,23,24$ and 25 , preferably in their freshman year. Subsequent completion of 32 additional hours in studio and art history courses, Art 75, a final exhibition of high standard, and a comprehensive departmental exam will fulfill the requirements for the major. Students should consult the Handbook for the Art Debartment, available in the departmental office, for further information.

Students who plan an emphasis in art history must talce Art 26, Art A37, Art A47, and one of the following: Art 76, internship, or independent study. They must also take four additional upper-level art history courses and Art 75. Students should consult the departmental handbook for further information. Students who plan graduate study in art history should talce either German or French (Spanish only if appropriate for intended graduate program). A reading proficiency in at least one foreign language (through 22) is required for graduate study.

Majors wishing to pursue a career in teaching must complete Psychology 21, Computer Science 16, and Education 11/01, $20,21,50 / 02,167$ and 171 in addition to the prescribed courses in the major (see Handbook for the Art Department). The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the

Teacher Education Program and other pertinent information.

ART is the prefix for art courses on schedules and transcripts.

21 Design Concepts I (2)
Fundamentals of two-dimensional design explored through lectures and class projects with emphasis on creative problem-solving, conceptual development and the formal elements of design, their character and organization.
Fall term.
22 Design Concepts II (4)
Prerequisites: Art 21 and 24 or permission of instructor.
A study of the elements and principles of threedimensional design. Lectures and projects explore a wide range of concepts for working in the threedimensional format.
Winter term.

## 23 Design Concepts III (2)

Prerequisites: Art 21 and 22 or permission of instructor.
Continuation of 21 with emphasis on color and space.
Spring term.
24 Drawing I (2)
A study of drawing, including the elements of art and composition, with extensive exercises using landscape, still-life and perspective. A variety of drawing media are explored.
Fall term.
25 Drawing II (2)
Prerequisite: Art 24 or permission of instructor.
Continuation of 24 , with emphasis on the human figure.
Spring term.
26 History and Appreciation of Art (4) A survey of Western Art in its historical context, and an introduction to principles and techniques for the analysis and evaluation of the visual arts.

P28 Art for Non-Art Majors (4) Introductory studio course for juniors and seniors to include a variety of media. To he taken on a pass/fail basis only. (Lab fee required.) Not offered annually.

30 Letter Forms (2)
Fundamental study of letter fonns with emphasis on historical styles, creative interpretation and design. Not offered annually.

## 31 Ceramics I (2)

Prerequisites: Art 21, 22, 23, 24 and 25 or permission of instructor.
Methods and processes of forming clay, with an emphasis on hand building. Surface enrichment will be developed through utilization of stains, slips and glazes. (Lab fee required.)
Fall term.

## 32 Painting I (2)

Prerequisites: Art 21, 23, 24 and 25 or permission of instructor.
Problems in pictorial composition, painting techniques and color theory. (Lab fee required.) Fall term.

## 33 Photography I (4)

Prerequisites: Art 21, 22, 23, 24 and 25 or permission of instructor.
Introductory course designed to develop basic photographic skills in black and white while encouraging visual communication, personal expression, basic design elements and creativity. Technical components include camera operation, black and white film development, black and white printing and enlarging, and presentation of work.
Enrollment preference given to art majors. (Lab fee required.)

## 34 Printmalcing I (2)

Prerequisites: Art 21, 23, 24 and 25 or permission of instructor.
Study and practical application of graphic processes of relief (woodcut) and intaglio (etching, soft ground, aquatint). (Lab fee required.)

## 35 Sculpture I (2)

Prerequisites: Art 21, 22, 23, 24 and 25 or uermission of instructor.
Exploration of three-dimensional forms and ideas through the use of clay, metal, wood and experimentation with new materials. (Lab fee required.) Fall term.

## 36 Arts of the Ancient World (4)

Prerequisite: Art 26 or permission of instructor. Survey of the major arts of Egypt, the ancient Middle Eastern and Greek and Roman civilizations.
Offered in alternate years.

## A37 Arts of African and Pre-Columbian

 Societies (4)Survey of the arts of traditional sub-Saharan African cultures and of Mesoamerican and South American cultures before Columbus.
Offered in alternate years.

## 38 Crafts

(4)

Exploration of traditional craft materials plus a study of nontraditional materials for their innovative potential in craft. (Lab fee required.) Offered in alternate years.

40 Advertising Design (4)
Prerequisites: Art 21, 23, 24 and 25 or permission of instructor.
Introduction to advertising design through the study of and solutions to problems in graphic design, utilizing traditional methods and computer. (Lab fee required.)
Winter or spring term.

## 41 Ceramics11 (2)

Prerequisite: Art 22 or permission of instructor. Continuation of 31. Emphasis on wheel throwing and an in-depth exploration of surface treatment. (Lab fee required.)
Spring term.

## 42 Painting II (2)

Prerequisite: Art 32 or permission of instructor. Continuation of 32. (Lab fee required.) Spring term.

## 43 Photography II (2)

Prerequisite: Art 33 or permission of instructor. A continuation of Photography I, designed so that students may explore a varietv of nontraditional and experimental techniques, including xerography, photomontage, multiple printing, handcoloring, photolithography, photo-silkscreen, and experimental cameras. The content of the course varies according to the student's individual photographic needs. A $n$ introduction to the zone system is also included. (Lab fee required.)


44 Printmalcing II (2)
Prerequisites: Art 21, 23, 24 and 25 or permission of instructor.
Study and practical application of graphic processes of lithography and serigraphy (silkscreen). (Lab fee required.)

## 45 Sculpture II (2)

Prerequisite: Art 35 or permission of instructor. A continuation of Art 35 with an emphasis on sculptural processes, including modeling, carving and casting. (Labfee required.)
Spring term.
46 Arts of the Medieval World (4)
Prerequisite: Art 26 or permission of instructor. Survey of the arts of Western Europe from the Christianization of the Roman Empire through the Gothic Age.
Offered in alternate years.
A47 Arts of China and Japan (4)
Historical survey of style from prehistory through the eighteenth century as influenced by sociopolitical changes and spiritual systems such as Buddhism, Confucianism and Daoism. Asian cross-cultural relationships are explored.
Offered in alternate years.
51 Ceramics III (2)
Prerequisites: Art 31, 41.
Continuation of 41 with an emphasis on personal development in the ceramics medium. Students develop in-depth technical and aesthetic skills as they relate to specific studio problems. (Lab fee required.)

## 52 Painting III (2)

Prerequisites: Art 32, 42.
Independent work in advanced painting.
The student is expected to propose and solve painting problems. (Lab fee required.)

## 53 Photography III

Prerequisite: Art 43.
Continuation of 43 with an emphasis on personal development of photographic vision. Students refine photographic slcills as they relate to various processes and photographic concepts. (Lab fee required.)

## 54 Printmalcing III

Prerequisites: Art 34, 44.
Advanced worlc in any one or two processes of printmaking. (Lab fee required.)

## 55 Sculpture III (2)

Prerequisites: Art 35, 45.
Continuation of 45 with an emphasis on personal development within a sculptural medium. Students acquire in-depth technical and aesthetic slcills as they relate to specific studio problems. (Lab fee required.)

56 Arts of the Renaissance and Baroque (4) Prerequisite: Art 26 or permission of instructor. Survey of the arts of Western Europe from the fifteenth century through the seventeenth century in relation to the culture of the time.
Offered in alternate years.
58 Art Education for Elementary School Teachers (2)
Prerequisite: Education 20 or Psychology 23. For junior and senior art education and education majors except by permission of the art department.
Introduction to the philosophy of art education and a child's development in art, with emphasis on a variety of hands-on processes with appropriate teaching methods.
Fall and spring terms.
59 Drawing III (2)
Prerequisites: Art 24, 25.
Independent work in advanced drawing. The student is expected to propose and solve drawing problems while refining drawing skills, techniques, and concepts. (Lab fee required.)

62 Watercolor (2)
Prerequisites: Art 21, 23, 24 and 25 or permission of instructor.
Exploring problems in pictorial composition, watercolor materials, techniques and color theory. Not offered annually.

66 Arts of the Nineteenth and Twentieth Centuries (4)
Prerequisite: Art 26 or permission of instructor.
Survey of development of the arts in the modem world.
Offered in alternate years.
75 Studio Seminar (2)
Prerequisites: Art 21, 22, 23, 24, 25, 26.
Required of students who pursue an emphasis in studio art. Includes study of theories of art as preparation for the senior presentations, field trips as an opportunity to evaluate art firsthand, and workshops on graduate school and portfolio preparation. Includes the senior exhibition. Involves some responsibilities over three terms.

76 Art Criticism
(4)

Prerequisites: minimum of two upper level art history courses or Art 26 and 66.
Introduction to the principles and practices of contemporary art criticism, with consideration of the historical development of this discipline, and with exercises in critical writing.
Offered in alternate years.
80 Directed Independent Study (1-4)
Investigation of a topic or internship not duplicated among regular course offerings. (Lab fee required.)

95 Special Topics in Art (2-4)
(Lab fee may be required.)

## Asian-African Program

## Coordinator: Gordon

A student may elect any course hom the Asian-African studies program to satisfy the graduation requirement. The course may be taken in the major, to satisfy a General Education requirement, or independently of the major and General Education requirements. The Asian-African requirement may not be taken on a pass/fail basis. If taken in the major, the regulations concerning major courses apply to this course. For course descriptions, see listings under individual departments. (Anthropology courses are included with Sociology courses.)

Anthropology A27 Peoples of Black Africa
Anthropology A28 Cultures of the NonWestern World (4)

Art A37 Arts of African and Pre-Columbian Societies (4)

Art A47 Arts of China and Japan (4)
Economics A40 Economic Growth and
Development (4)
History A50 South Asia (4)
History A51 China (4)
History A54 History of Africa (4)
History A55 Cultural History of Japan (Prehistory to 1800) (4)

History A56 History of Modern Japan (1800 to Present) (4)

History A57 History of the Modern Middle East (4)

History A58 History of Japanese Religion and Its Practice (4)

Modern Languages and Literatures A34 Survey of Chinese Literature (4)

Modern Languages and Literatures A35
Classic Chinese Fiction (4)
Modern Languages and Literatures A36
Twentieth Century Chinese Literature (4)
Modern Languages and Literatures A38
African Literature (4)
Modern Languages and Literatures A42
Black Novel in French (4)
Modern Languages and Literatures A50
Foreign Studies in Chinese Culture (4)
Philosophy A43 Indian Philosophy (4)
Philosophy A44 Chinese Philosophy (4)
Philosophy A45 Japanese Philosophy (4)
Political Science A43 Politics of Developing
Nations (4)
Political Science A44 Politics of
Africa (4)
Political Science A45 Politics of the Middle East (4)

Political Science A46 Politics of China (4)
Political Science A47 Politics of Asia (4)
Political Science A48 Politics of South
Asia (4)
Political Science A72 Issues in African Politics (4)

Political Science A73 Issues in Chinese Politics (4)

Religion A36 Geography and Archaeology of the Biblical World (4)

Religion A41 Buddhism (4)
Religion A42 Islam (4)
Religion A44 African Traditional Religions (4)
Religion A45 Religions of the World (4)
Religion A49 Hinduism (4)

## Asian Studies

Professors: Leavell (Chair), Shaner
Associate Professors: Peterson, Xu, Yagi
Assistant Professors: Britt, Faitler, Khandke, Palmer

## Majors

From the following list of courses, a student can arrange an interdisciplinary major in Asian studies. Eight to eleven courses are required for the major. Students will focus on India, China, or Japan, but their studies will also include the other two areas. They are expected to maintain a disciplinary balance including two courses in history, one in the social sciences, one in philosophy or religion and one in the arts or literature.

Majors focusing on China or Japan are required to talce through the 21 level the appropriate Asian language. The 21-level course counts towards the major. Majors focusing on India are encouraged to study an Indian language through the self-instructional program conducted by the Department of Modem Languages and Literatures.

A senior seminar is required of all majors. For course descriptions, see listings under individual departments.

AS is the prefix for Asian studies courses on schedules and transcripts.


Art A47 Arts of China and Japan (4)
Asian Studies 75 Seminar in Asian Studies (4)
Asian Studies 80 Directed Independent Study (4)
Asian Studies 95 Special Topics in Asian Studies (4)

Chinese 21 Intermediate Chinese Language
Economics A40 Economic Growth and Development (4)

History A50 South Asia (4)
History A51 Cultural History of China (4)
History A52 History of Modern China (4)
History A55 Cultural History of Japan (4)
History A56 History of Modern Japan (4)
History A58 History of Japanese Religion and its Practice (4)

Japanese 21 Intermediate Japanese Language
Modern Languages and Literatures A34
Survey of Chinese Literature (4)
Modern Languages and Literatures A35
Classic Chinese Fiction (4)
Modern Languages and Literatures A36
Twentieth Century Chinese Literature
Modern Languages and Literatures A37
Modern Japanese Literature (4)
Modern Languages and Literatures A50
Foreign Studies in Chinese Culture
Modern Languages and Literatures A95
Chinese Literature (4)
Philosophy A43 Indian Philosophy (4)
Philosophy A44 Chinese Philosophy (4)
Philosophy A45 Japanese Philosophy (4)
Political Science A46 Politics of China (4)
Political Science A47 Politics of Asia (4)
Political Science A48 Politics of South Asia (4)
Political Science A73 Issues in Chinese Politics (4)
Religion A41 Buddhism (4)
Religion A49 Hinduism (4)

## Biology

Professors: Fairbanks, Kerstetter, Pollard, Snyder, Stratton (Chair), Teslta
Associate Professors: Blaker, Thompson, Worthen
Assistant Professors: Haney, Hudson, Turgeon
Courses which satisfy the General Education requirements are Biology 11 and 16. Biology 16 is recommended for non-majors who may want to become certified to teach. Credit cannot be earned for both Biology 11 and 16. Biology 11 and 16 may not be paired for the General Education requirements. For students applying to health professional schools that require 8 semester hours of general biology, it is recommended that they talce Biology 11 and 30.

## Majors

Candidates for the B.S. degree with a major in biology must take Biology 11 as a General Education requirement, Biology 30, 31, either 32 or $35,33,34,75$, either 80 or 83 or 85 , and enough elective courses (numbered 20 or above) to provide a total of at least 10 courses in biology, each of which must be at least 3 hours. They must also talce Chemistry 11,12 , and 21. Students preparing for professional and graduate schools should be careful to meet their entrance requirements, which may include some courses not required for the B.S. degree.

Majors who are candidates for the B.A. degree in biology must talce Biology 11, 75,80 or 83 or 85 , and enough additional courses to provide a total of 10 courses in biology, each of which must be at least 3 hours. This major is provided for students who have a genuine interest in biology but do not plan on graduate work or other advanced training.

All biology majors are urged to take a comprehensive examination such as the Graduate Record Examination (Biology Subject Test) or the Medical College Admission Test. Each major must make an oral presentation on some topic of biology, as part of Biology 75.

Majors whose career preparations require taking a significant number of non-biology science or mathematics courses may, with the approval of the chair, substitute up to two other courses in science, psychology, mathematics, or computer science for certain biology courses. Majors wishing to pursue a career in teaching must complete Computer

Science 16 and Education 11/01, 20, 21, 50/02, 54 (or major department equivalent), 167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information.

Students interested in inarine biology may talte advantage of the Dulce University Marine Laboratory, where they may talce up to four courses for a maximum of 16 semester hours of credit. Duke's Nicholas School of Environment offers undergraduates a unique opportunity for study at a world-class marine laboratory where they may talce courses in such areas as oceanography, marine physiology, marine ecology, inarine invertebrate zoology, marine policy, and others.

Biology majors who are interested in environmental issues may apply to take part in the Earth or Universe Semesters at Columbia University's Biosphere 2 in Tucson, Arizona. Opportunities are also available for study off campus at several colleges, research laboratories and hospitals. Participating students benefit by working under specialists in their field of interest and may receive credit for corresponding biology courses or Biology 80, 83 and/or 85 .

BGY is the prefix for biology courses on schedules and transcripts.

## 11 Foundations of Biology (4)

 Introduction to the concepts of biology, emphasizing the diversity and similarity of life. Topics include cell metabolism, evolution, taxonomy, and the physiological and structural adaptations of organisms to their environments. Laboratories emphasize an investigative approach. Designed for science majors. (Lab fee required.)16 Principles of Biology (4)
Study of the basic principles common to living organisms, including cell structure and function, genetics, classification of organisms, organismal physiology, behavior, ecology, and evolution. Designed for non-science students, especially those interested in teaching certification; not normally taken by biology majors. Includes lab work.
(Labfee required.)

18 Human Anatomy (4)
Permission of the chair required for B.S. biology majors. Descriptive study of major human organ systems with emphasis on functional characteristics, particularly the musculo-skeletal system. Laboratory includes identification of human bones and microscopic slides of human tissue, and dissection of cats and individual mammalian organs (e.g., hearts). (Lab fee required.)

## 30 Genetics (4)

Prerequisite: Biology 11 or 16 .
Introduction to the studv of inheritance. Tonics include transmission of genes in cellular and organismal reproduction, structure and arrangement of genetic material in the cell, control and function of genes, and population genetics. Equal emphasis given to inheritance patterns and molecular genetics. Laboratories focus upon testing the genetics of Drosophila and other organisms, and include basic molecular techniques. (Lab fee required.)

## 31 Research and Analysis (4)

Prerequisites: any two biology courses.
Introduction to purposes and methods of scientific inquiry. Philosophy of science, research design, use of biological literature sources, fundamental laboratory techniques, statistical analysis, and survey of careers in biology. Laboratory work involves designing, performing, and reporting on research projects. (Lab fee required.)

## 32 Ecology (4)

Prerequisite: Biology 11 .
A study of the interactions between organisms and
their environments, and the consequences of these interactions for population dynamics, community structure, and the flow of energy and matter through ecosystems. Also, consideration of environmental issues and conservation. Laboratories include local field work, experiments, and possibly one or two overnight/weekend field trips. (Lab fee required.)

## 33 Cell Biology (4)

Prerequisites: Biology 11, Chemistry 11.
Recommended: Chemistry 12, 21.
A comprehensive study of plant, animal, and microbial cell biology dealing with the chemistry of cells, bioenergetics, cell ultrastructure and its relation to function, specialized cell types, and cell-to-cell communication. Laboratory emphasis is on investigations using modern cytological techniques. (Lab fee required.)

## 34 Animal and Plant Physiology

 Prerequisite: Biology 33.Course focuses on comparative aspects of animal and plant physiology. One half of the course is a study of animal organ systems in invertebrate and vertebrate organisms, with laboratory work including studies of metabolism, respiration and osmoregulation. The plant portion of the course emphasizes plant water relations, organic and mineral nutrition, transport in xylem and phloem, growth and development, and stress physiology. Plant laboratory work focuses on tissue culture, growth regulators, photosynthesis, and mineral nutrition. (Lab fee required.)


## 35 Tropical Ecology (4)

Prerequisite: any biology course, and permission of instructor.
Studies of the composition, structure, and function of tropical ecosystems, communities, and populations. Taught in Costa Rica. The emphasis is field studies in rain forests and other tropical habitats. Offered in alternate years.

## 40 Chordate Morphology and

Development (4)
Prerequisite: Biology 11.
Lecture and laboratory comparative study of the embryology and adult anatomy of representative chordates. Laboratory dissections include the dogfish shark and the cat. (Lab fee required.)

## 41 Invertebrate Zoology

Prerequisite: Biology 11.
Survey study of both major and minor phyla, including taxonomy, ecology, behavior and physiology of selected organisms. Laboratories include field trips to marine, freshwater, and terrestrial sites in addition to dissections and use of taxonomic kev̧s. (Lab fee required.)
Offered in alternate years.
42 Microbiology (4)
Prerequisite: Biology 11.
A n elective course designed for juniors and seniors. Investigation of the biochemistry, physiology, immunology, pathogenicity, isolation, and identification of microorganisms, particularly bacteria. Laboratory work teaches standard procedures for studying the physiology of bacteria, and the identification of unknown bacteria. (Lab fee required.)

## 43 Histology (4)

Prerequisite: Biology 33.
Equal time spent on tissue structure and histotechnique. Limited time spent on histochemistry. Coverage of both plant and animal tissues in laboratory. (Lab fee required.)

## 44 Field Botany (4)

Prerequisite: Biology 11 or 16.
Natural relationships of vascular plants, practice in the use of identification keys, experience in recognizing species in the field, techniques used in collecting and preparing herbarium specimens, and exposure to pertinent literature. Laboratories include field trips. (Lab fee required.)
Offered in alternate years.
45 Field Zoology (4)
Prerequisite: permission of instructor.
Taxonomic techniques, natural history and phylogenetic relationships of the vertebrates. Emphasis on mammals, reptiles, and amphibians. Frequent laboratories and field trips (including at least one
overnight) to observe, identify, and collect animals. (Lab fee required.)
Offered in alternate years.
46 Human Physiology (4)
Prerequisite: Biology 11.
Molecular and cellular biology in first several sessions, followed by survey of the functions of the various organ systems in the human body. Laboratory involves studies of humans, using MacIntosh Data Acquisition Stations. (Lab fee required.)

## 47 Neurobiology (4)

Prerequisite: Biology 11.
Structure, function, and interactions of neurons and supportive cells of the nervous system. Analysis of simple neuronal circuits and neuronal alterations in development, memory, and neurological disorders. Laboratories include the study of nervous system cells in culture and groups of neurons in the rat. (Lab fee required.)

48 Natural Resource Management
Prerequisite: permission of instructor.
Technical introduction to fisheries, forestry, wildlife, and land management. Laboratories include identifying common game species and learning techniques of forestry and wildlife management. Field trips (including two overnights) to view resource management and utilization in action. (Lab fee rerquired.)
Offered in alternate years.
49 Developmental Biology (4) Prerequisite: Biology 30.
Embryonic changes are studied at the genetic, biochemical, cellular, and spatial levels. Growth, metamorphosis, tumors, and aging are also studied. Emphasis is on mechanisms of developmental processes, rather than on anatomy. Laboratory involves handling and manipulating living embryos of several species. (Lab fee required.)
Offered in alternate years.

## 50 Nutrition (4)

Prerequisite: Biology 11 or 16 .
Composition, chemistry, digestion, absorption, and metabolism of foods. Other topics include energy balance, food additives, food sensitivities, and the role of diet in development and disease. The animal nutrition topics meet the needs of preveterinary students. Includes laboratory. (Lab fee required.)

51 Field Studies in Biology (1-4 hours, as announced by instructor)
Prerequisite: permission of instructor; Biology 32 recommended.
Study/travel course focusing on floral and faunal compositions and analysis of species interactions in
a variety of habitats and ecological communities not found in South Carolina. Usually involves camping, hiking, and travel by canoe, raft, or boat in areas such as Canada, New England, Roclcy Mountains, desert Southwest, or Everglades.

## 52 Immunology (4)

Prerequisite: Biology 33.
A study of the immune system dealing with both adaptive and innate immunity. Topics include cellular aspects of immunology, antibody-antigen interactions, the genetic basis of antigenic recognition, regulation of the immune response, tumor immunology and autoimmunity. Laboratory emphasis is on student research projects investigating various aspects of immunity. (Lab fee required.)

53 Molecular and Metabolic Biology (4) Prerequisites: Biology 30, 31, 33; Chemistry 21. Intermediary metabolism and molecular genetics Topics include enzyme properties, metabolism of carbohydrates, lipids and amino acids, DNA replication, gene expression and its control, and artificial manipulation of genes. Laboratory work involves various techniques used in biochemistry and molecular biology. (Lab fee required.)

## 54 Biology of the Andes/Galápagos (4)

Prerequisites: Biology 32 or 35 and permission of instructor.
Ecology of the Andes Mountains, with emphasis on the unique flora and fauna endemic to this region.
Ecological and behavioral studies in the Galápagos Islands as viewed from an evolutionary prospective.
Taught in South America.
Offered in alternate years.
55 Population Genetics and Evolution
Prerequisites: Biology 30, or permission of instructor.
Study of evolutionary mechanisms that change the genetic structure of populations. Also, patterns of evolutionary change documented by the fossil record, biogeography, comparative anatomy, and genetic similarity. Labs include experiments in Drosophila evolution, computer simulations, and at least one field trip (fossils). (Lab fee required.) Offered in alternate years.

58 Environmental Systems
Prerequisites: Permission of instructor; Biology 11 or Chemistry 11 or Earth and Environmental Sciences 11.
Same as Earth and Environmental Sciences 58. Interdisciplinary examination of the physical, biological and chemical processes that control the flow of matter and energy in surface environments on planet Earth. Emphasis on the interactions between abiotic and biotic processes. Lab includes field studies and weekend field trips. (Lab fee required.)

## 75 Seminar in Biology (0)

Prerequisite: permission of instructor. Presentations of current topics in biology by students, faculty, and visiting scientists. Emphasis is on effective oral communication and critical examination of scientific information and ideas. Students are encouraged to use their worlc in Biology 80 or 85 as topics of presentations.

80 Directed Independent Study (1-4) Prerequisite: permission of instructor; Biology 31 strongly recommended.
A n independent study project not involving laboratory or field research. Working with a faculty sponsor, the student chooses a topic of biological significance and writes an agreement specifying work expectations. The student then performs an exhaustive literature search and writes a comprehensive paper describing current understanding of the topic. A required oral presentation of the topic is usually done in the context of Biology 75.

## 83 Internship in Biology (1-4)

Prerequisites: permission of instructor; Biology 31 strongly recommended.
This course provides students with an opportunity for direct training and worlc experience in one or more aspects of the biological sciences at an off campus facility. Working with a faculty sponsor and an on-site supervisor, students develop objectives for the internship/preceptorship experience, write an agreement specifying what is expected, and keep a detailed $\log$ of their activities. In conjunction with this experience, students select a topic of biological significance, perform a thorough literature search, and write a significant paper describing the current understanding of the topic. A required oral presentation of the topic is usually done in the context of Biology 75.

## 85 Research in Biology (1-4)

Prerequisites: permission of instructor and Biology 31.
A project involving original and relatively independent research. Working with a faculty sponsor, the student poses a question of biological significance, writes an agreement specifying work expectations, devises the experimental protocol, and collects data to evaluate the nuestion. Laboratory or field projects may be performed either on campus or at other locations. A research paper and oral presentation of the topic are required upon completion of the project, with the oral presentation usually done in the context of Biology 75. (Lab fee required.)

## 95 Special Topics in Biology (4)

Course content varies each term offered. (Lab fee required.)

## Chemistry

Professors: Arrington, Kane-Maguire, Knight (Chair), Lee, Trzupek, Wright Associate Professors:Hanks, Wheeler Assistant Professor: Petty
Courses which satisfy the General Education requirements for B.A. degree candidates are Chemistry $11,12,16$. Chemistry 16 is designed especially for non-science majors.

## Maiors

The chemistry department is accredited by the American Chemical Society (ACS).

Chemistry majors talcing Chemistry 11 and 12 as General Education requirements plus the sequence Chemistry 21, 22, 23, 31, 32, 33, 34, 75 and 85 , with necessary prerequisites, qualify
to receive B.S. degrees certified by the ACS. For the ACS certified chemistry/biochemistry degree, students are required to take the same courses through Chemistry 33 , plus $43,44,75$ and 85 . The accredited degree programs are strongly recommended for all who plan graduate study in chemistry or a career in medical research.

Additional courses selected from Chemistry 41, 42, 43 and 47, Mathematics 34, and experience in statistics and computer science are recommended.

I11 unusual cases majors may make up to two substitutions of other science courses or mathematics courses for chemistry courses above 32 with the approval of the chair to allow structuring of interdisciplinary programs or double majors.


Participation in the annual summer undergraduate research program is accepted in lieu of the required Chemistry 80 or 85 .

Majors wishing to pursue a career in teaching must complete Biology 11 ; Computer Science 16; Mathematics 11 and 12; Physics 11 and 12; and Education 11/01, 20, 21, 50/02, 54 (or major department equivalent), 167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginnning o n page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information.

Each student must write a paper based on research or independent study and present the work to a faculty committee. Papers prepared in the summer undergraduate research program may meet this requirement. Senior-level comprehensive exams may be required. All prospective majors are urged to schedule mathematics and physics courses prerequisite to upper-level chemistry courses as early as possible.

Graduate Courses. Courses are available leading to the Master of Science degree. Eligibility for enrollment in courses and requirements for the degree are described under Graduate Studies, page 142.

CHM is the prefix for chemistry courses on schedules and transcripts.

11 Foundations of Chemistry I Principles (4)
Introduction to the principles of chemistry. Topics include stoichiometry, properties of the states of matter, atomic and molecular structure and chemical bonding, with emphasis on problem solving, conceptual understanding and analytical reasoning. Laboratory program focuses on quantitative measurements and interpretation of data. (Lab fee required.)

## 12 Foundations of Chemistry II -

Inorganic (4)
Prerequisite: Chemistry 11.
Continuation of Chemistry 1I, with emphasis on chemical thermodvnamics; equilibria, acid-base chemistry, oxidation and reduction processes, kinetics, nuclear chemistry, and descriptive inorganic chemistry. Laboratory program includes a quantitative component and a study of inorganic reactions. (Lab fee required.)

16 Chemistry for Non-Science Majors (4) Introduction to the scientific method, how chemists approach the study of nature, interrelationships between theory and experiment, and the nature of scientific information. Important discoveries affecting our lives are surveyed and implications for personal and societal decisions are explored.
21 Foundations of Chemistry 111 - Organic Prerequisites: Chemistry 11 and 12 or their equivalent.
Emphasis on the application of chemical principles to carbon compounds. Physical and chemical properties of the major organic functional groups, an introduction to stereochemistry, molecular stability, and related concepts of organic compounds are covered. Laboratory emphasizes reaction set-ups, recrystallization, distillation, extraction, and chromatography. (Lab fee required.)
22 Molecular Structure (4)
Prerequisites: Chemistry 11, 12, 21.
Introduction to spectroscopy, with an emphasis on techniques such as infrared, UV visible absorption, nuclear magnetic resonance, and mass spectroscopy for the elucidation of organic and inorganic molecular structures. Coverage is also given to the structure and reactivities of the main group and transition metal elements and their compounds. (Lab fee required.)
23 Experimental Techniques of
Chemistry I (4)
Prerequisites: Chemistry 21 and 22.
Laboratory exercises involving multi-step synthesis, purification, and analysis of both organic and inorganic compounds are emphasized. Use of modem chemical instrumentation, utilization of the chemical literature, and the oral and written presentation of experimental data are requirements. (Lab fee required.)
31 Physical Chemistry I (4) Prerequisites: Chemistry 22, 23, Mathematics 12, Physics 11, or permission of instructor. Development of the basic methods of physical chemistry and the theoretical and quantitative foundations for further study in chemistry. A knowledge of calculus and introductory physics is essential. Topics are introduction to quantized energy levels, molecular structure, spectroscopy, kinetic theory of gases, chemical kinetics and reaction dynamics. (Lab fee required.)
32 Structure and Chemical Reactivity (4) Prerequisites: Chemistry 21,31, or permission of instructor.
Development of modern organic and inorganic chemistry, with emphasis on the use of mechanistic principles in the study of reaction types and synthetic methods.

## 33 Analytical Chemistry (4)

Prerequisites: Chemistry 23, 31 .
Advanced analytical measurements, data analysis and instrumental methods including titrimetry, atomic and molecular spectroscopy and electrochemistry. Advanced chemical separations including extraction, gas and liquid chromatography and electrophoresis. Laboratory program emphasizes intensive hands-on experience with state of the art equipment including voltammographs, AA , capillary GC-MS, HPLC, HPCE, UV/Vis and emission spectroscopy. (Lab fee required.)
34 Physical Chemistry and Techniques of Chemistry II (4)
Prerequisites: Chemistry 31, 32, Mathematics 11, 12,21 , Physics 11,12 , or permission of instructor. Lecture topics include thermodynamics with important applications and special topics in physical chemistry such as quantum examples, solids and various areas of spectroscopy. Laboratory work consists of physical measurements and spectroscopic characterization of matter. Students work with lasers, computer interfaced instrumentation, high vacuum apparatus and other sophisticated laboratory equipment. (Lab fee required.)

## 41 Quantum Chemistry (4)

Prerequisites: Chemistry 31, Mathematics 21. The first quarter of the course is an exploration of the origins of quantum theoretical concepts and formalisms. The second quarter presents applications to systems that can be solved exactly (model systems and H atom). The remaining half presents various computational methods used to find suitable approximate solutions for more complex real chemical systems (valence theory).
42 Advanced Structure and Reactivity
Prerequisites: Chemistry 32, 33.
Further development of modern organic and inorganic chemistry, with emphasis on the use of mechanistic principles in the study of chemical reactivity. The chemical applications of group theory and symmetry to the rationalization of reactivity, absorption spectra, and optical activity.
43 Biological Chemistry (4)
Prerequisites: Biology 11; Chemistry 32 or permission of instructor; Physics 12. Introduction to biochemistry from a rigorously chemical viewpoint. Topics include: the chemistry of biomolecules, basic enzymology, introductory molecular genetics, and basic metabolism. Laboratory exercises involve isolation and purification of nucleic acids and enzyme kinetics. (Labfee required.)
44 Advanced Biological Chemistry
Prerequisite: Chemistry 43.
Advanced topics in bio-organic chemistry, mostly related to enzymes, kinetics and coenzymes, as well
as detailed discussion of nucleic acid chemistry/biochemistry, molecular aspects of genetics, and gene control. Laboratory work includes isolation and purification of enzymes, determination of DNA structures, DNA sequencing, and individual mini-projects. (Lab fee required.)

47 Environmental Chemistry (4)
Prerequisites: Chemistry 23, 31 and 33 or permission of instructor(s).
Advanced study of chemical processes and chemical measurements as they relate to environmental systems and environmental assessment. Topics include risk assessment, statistical sampling, atmospheric chemistry, water/soil chemistry, toxicology and waste disposal. Includes environmental measurements laboratories. (Lab fee required.)
75 Seminar in Chemistry (0)
Students present seminars based on current literature. Surveys of assigned journals are presented individually; more detailed presentations are made by small groups working as teams. Purposes include coverage of recent important developments, experience in malting scientific presentations, and encouragement of good literature reading habits.
80 Directed Independent Study (4)
Students conduct an independent study not involving laboratory research on a selected topic in consultation with the devartment chair. Oral presentation and formal paper required.
85 Undergraduate Research (4)
Laboratory research of an original nature is conducted under the direct supervision of a chemistry professor. An oral presentation and formal paper describing the relevant literature and the research project are required. (Lab fee required.)
95 Special Topics in Chemistry (4) Special topics important in various fields of modem chemistry.

## 175 Graduate Seminar in Chemistry (Counts as two courses)

Students present seminars based on current literature. Surveys of assigned journals are presented individually; more detailed presentations are made by small groups working as teams.
180 Special Topics in Chemistry (4)
Special topics important in various fields of modern chemistry.
185 Research (4)
Original laboratory research.
190 Thesis (4)
Master's thesis.

## Classics

Professor: Leen (Chair)<br>Assistant Professors: Blackwell, Prior

The Department of Classics offers courses in the languages and cultures of the ancient Greelc and Roman worlds. The department offers majors in Greelc and Latin and participates in the Classical Studies concentration. Refer to the Concentrations section on Pages 11*12 for specific requirements for the Classical Studies concentration.

Classics 32 and 33 meet the General Education requirement in literature. Classics $31,32,33,34,35,40,41$, and 50 fulfill the General Education requirement in upper level humanities. Classics courses have no prerequisites, presuppose no knowledge of the Greek or Latin languages, and are open to all students. Latin and Greek courses meet the General Education requirement in language.

All Furman students are required to demonstrate proficiency in a foreign language through the 21 level, or pass at least one course beyond the 21 level at Furman. Incoming freshmen and transfer students who have studied Latin should take the placement test. Those who intend to continue study in Latin must take the placement test. The placement test determines the lowest level at
which students may receive credit and where they must begin their study of the language at Furman. Students may opt to begin a new language.

Placement at the 11 level introduces students to a language. It is followed by 12 and 21 , which satisfy the General Education reauirement. Students who have had three or more years of a language cannot be placed into an 11-level class.

Placement at the 12 Y level means that a student is too proficient to begin in the 11 level, but not yet skilled enough to succeed at the 21 -level. Latin 12 Y is not equivalent to Latin 12. Latin 12 Y provides an intense review of the basics of grammar with a careful analysis of more advanced syntax.

A student olaced into Latin 21 need onlv take that one class to satisfy the General Education requirement in foreign language.

Placement at the 30 level requires successful comvletion of anv one 30 -level class.

Students may not take the course that satisfies the requirement ( 21 or 30 level depending on placement) pass/fail.

There is no placement test for Greelc. Students who Cave studied Greek must consult with the chair of the department to determine olacement.

Transfer students generally meet the foreign language requirement by presenting credits (at

least 12 semester hours) which are equivalent to the $11,12,21$ sequence at Furman. Those who have not completed the above equivalents are advised by the Associate Dean and University Registrar, in consultation with the department. Transfer students should also take the placement test if they have studied Latin or consult with the chair of the department if they have studied Greek.

Only ancient languages not taught at Furman may be taken at another accredited institution to fulfill the General Education requirement, and then only with permission of the chair of the department.

GRK is the prefix for Greelc language courses on schedules and transcripts; LAT is the prefix for Latin language courses; CL is the prefix for Classics courses.

## Majors (Greelc or Latin)

Eight courses beyond the General Education requirement will meet the requirements for a major. Three courses from Classics 31, 32, 33, $34,35,40,41$, and 50 may be credited toward a major. Art 36, History 30, and Philosophy 31 are recommended.

## Study Abroad

The Department of Classics regularly offers a study abroad course, CL 50, in either Greece or Italy or both.

## Teacher Education

Majors wishing to pursue a career in teaching must complete Computer Science 16 and Education 11/01, 20, 21, 50/02, 167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be coinpleted on a postbaccalaureate, graduate credit basis, with the student becoining eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information.

## Classics

## 31 Mythology (4)

Greelc and Roman mythology. Topics include myths as they appear in various ancient literary and artistic contexts, and theories of the interpretation of myth.

32 Greelc Literature in Translation (4) Survey in English translation of Classical Greelc literature, including the Homeric epic poems, Greelc tragedy and comedy, and other significant genres.

33 Latin Literature in Translation (4) Survey in English translation of Latin literature. Topics include a general survey of Latin literature and the concentrated reading and interpretation of selected worlcs by authors such as Plautus, Caesar, Cicero, Catullus, Horace, Vergil, Livy, Seneca, and others.

34 Introduction to Greelc Archaeology Introduction to the goals, methodologies, and achievements of archaeological excavation with special reference to ancient Greelc sites.

35 Roman Archaeology (4) Illustrated lecture survey of the principal archaeological sites in Italy with special emphasis on ancient Rome. Study of the material culture and monumental remains and the developing styles in Roman art, architecture, and city planning. Principal sites and monuments, as well as techniques and methods of excavation, are examined.

## 40 Greek Civilization (4)

Survey, organized chronologically, of Greelc political, military, and economic history, development of literature, sculpture and major architecture; attention to domestic and religious aspects of the Greelc experience.

## 41 Roman Civilization (4)

A study of Rome from its origins to its putative fall in the fifth century. Particular attention is paid to the development and influence of Roman social, cultural, and political structures.

50 Study Abroad in Classical Civilizations (4) Cultural history of the ancient Greelc and Roman world, including art and architecture, archaeology, literature, religion, and daily life. Course itinerary will vary.

80 Directed Independent Study
95 Special Topics in Classics (4)
The opportunity to address a topic not normally covered in the standard curriculum.

## Greek

11 Elementary Greelc (4)
Introduction to the fundamentals of fifth century
Attic Greek. Topics include pronunciation, basic vocabulary, grammar and syntax, practice in reading basic Greek. The graded reading material is adapted from classical texts and cultivates an appreciation of Greek literature and culture.

## 12 Elementary Greelc II (4)

Continuation of Greek 11. Topics include continued study of vocabulary, grammar and syntax; reading more difficult Greek; gaining greater appreciation of Greelc literature and culture.

## 21 Intermediate Greek (4)

Reading and interpretation of writings from Classical authors and the Greek New Testament. Topics include new vocabulary, review of basic grammar and introduction to new grammar, guidance in translation and comprehension of moderately difficult Greek.

## 22 New Testament Greelc

Selected readings from the various genres of New Testament literature. Attention is paid to differences of idiom between Attic and Koine Greek.

31 Koine and Hellenistic Greek (4)
Selected readings from biblical, early Christian, and secular literature from 300 B.C. to 200 A.D.

## 32 Greek Epic (4)

Selected readings from Homer: Iliad or Odyssey. Attention is paid to differences between Epic and Attic idiom, poetic features (e.g. metrics, figures of speech), and the influence of Greelc epic on later Western epic poetry.

33 Greek Drama (4)
Selected readings from Aeschylus, Sophocles, Euripides, or Aristophanes. Attention is paid to the evolution of Greek drama and the authors' places within that evolution.

## 34 Greek Prose (4)

Selected readings from Herodotus, Plato, or
Thucydides. Attention is paid to advanced grammar, rapid comprehension, and scholarly interpretation of the text.

## 80 Directed Independent Study

95 Special Topics in Greek (4)
The opportunity to address a topic not normally covered in the standard curriculum.

NOTE: 30-level courses in Greek may be repeated once, with change of author.

## Latin

11 Elementary Latin (4)
Introduction to the fundamentals of classical Latin. Topics include pronunciation, basic vocabulary, grammar and syntax, practice in reading basic Latin. The graded reading material is adapted from classical texts and cultivates an appreciation of Latin literature and culture.

12 Elementary Latin II (4)
Continuation of Latin 11. Topics include continued study of vocabulary, grammar and syntax; reading more difficult Latin; gaining greater appreciation of Latin literature and culture.

12Y Intensive Elementary Latin (4)
Intensive course in the basic skills leading to an appropriate use of the language and an appreciation of the culture and literature of ancient Rome. Topics include review of pronunciation, basic vocabulary and grammar, introduction to more advanced grammar and syntax, etymology, and practice in reading basic Latin. Enrollment by placement only.

21 Intermediate Latin (4)
Reading and interpretation of writings by classical Latin authors. Topics include new vocabulary, review of basic grammar and introduction to new grammar, guidance in translation and comprehension of moderately difficult Latin.

## 31 Latin Drama (4)

Reading of select comedies of Plautus and Terence.
Topics include grammar, meter, style, figures of speech, guidance in translation, comprehension, and scholarly interpretation of the text.

## 32 Latin Poetry <br> (4)

Selected readings from authors such as Catullus, Horace, Propertius, Tibullus, Ovid, or Vergil.
Topics include review and introduction to advanced grammar, style, meter, figures of speech, guidance in translation, comprehension, and scholarly
interpretation of the text.

## 33 Latin Prose (4)

Selected readings from authors such as Caesar, Cicero, Livy, Pliny the Younger, Sallust, and Seneca. Topics include review and introduction to advanced grammar, guidance in translation, comprehension, and scholarly interpretation of the text.

34 Medieval and Renaissance Latin (4) Introduction to Medieval and Renaissance poetry and prose. Topics include the syntax of Medieval Latin, medieval thought, and the transmission of classical culture through the Middle Ages and into the Renaissance.

40 Latin Prose Composition (4)
Study of Latin syntax and the expression of ideas of moderate complexity in Latin.

80 Directed Independent Study
95 Special Topics in Latin (4)
The opportunity to address a topic not normally covered in the standard curriculum.

NOTE: 30-level courses in Latin may be repeated once, with change of author.

## Communication Studies

Associate Professors: DeLancey, Letteri (Chair)

Communication Studies majors are required to take a minimum of eight courses. All majors must take Communication Studies 20 and one other 20-level course, plus Communication Studies 30 and two other 30 - or 40 -level courses. To encourage a multi-disciplinary study of communication, students may also count toward the major up to two courses from the following list: Art 33, 40 and 76; Economics and Business Administration 31, 34 and 37; English 34, 39 and 67; Philosophy 21, 31 and 42; Political Science 23, 30 and 31; Psychology 24, 32 and 47; and Sociology 30, 31 and 46.

Majors work with their advisor to select courses suited to their individual needs. They are also encouraged to participate in such student organizations as the debate society, media club, newspaper and radio station.

COM is the prefix for Communication
Studies courses on schedules and transcripts.
20 Public Speaking (4)
Study of the fundamental principles and strategies of informative, persuasive and ceremonial speaking. Emphasis is placed on how to research, organize, and deliver a speech. The ethical, political and social character of public speaking is also examined. Students perform a variety of speeches and oral exercises and will be asked to play the roles of speech critic and interlocutor.

22 Argument and Debate (4)
Study of the role of argument and debate in the formation of public policy. Students analyze the structure and functions of various types of arguments and the role of debate in both academics and government. Students also leam to critically analyze issues, gather and evaluate evidence, and construct briefs. In addition, they participate in classroom debates on significant national issues.

## 24 Persuasive Speaking (4)

Advanced study of the main principles and techniques of persuasive speaking and the ethical implications of various persuasive techniques employed in such areas as interpersonal communication, advertising and political campaigning. The course identifies obstacles to persuasion and strategies for addressing these obstacles. Students apply their understanding of these principles, strategies and techniques in a series of speeches.

## 26 Speech Writing and Advocacy (4)

Prerequisites: Communication Studies 20, Computer Science 16.
Advanced study of the theory and practice of
speech writing and advocacy used in political campaigns, social movements, and public relations. The course examines how to construct different types of speeches based on the analysis of audience demographics, speakers' ethos, and the speech setting. The course also examines theories, principles and strategies of public advocacy and ethical and political issues related to advocacy. Students write and present speeches, deliver power point presentations, and create news releases, newsletters and home pages as part of an integrated advocacy strategy.

30 Communication Research Methods (4) Survey of the major theoretical developments within the history of rhetoric and the quantitative and qualitative methods researchers employ to study communicative acts in the fields of interpersonal, organizational, and mass communication. Students complete a research project and report their findings in the class.

32 Interpersonal Communication (4)
A theoretical overview of the oral and nonverbal strategies individuals use when negotiating perspectives on the self, others, and small groups. Areas of likely focus are the communicative dynamics involved in friendship, marriage, families, student-teacher relations, and group meetings.

## 36 Rhetorical Criticism (4)

Survey of the major methods of rhetorical criticism such as Neo-Aristotelianism, dramatism, social movement rhetoric, and close textual analysis. Students study the theoretical underpinnings of these methods, examine the nature of rhetorical texts, analyze scholarly essays that employ these methods, and write and present essays based on their own critical analysis of rhetorical texts.

38 Media Criticism (4)
Study of critical methods used to analyze the mass media and popular cultural texts. Students learn the theoretical basis of such critical methods as semiotics, narrative and ideological theory, cultural studies, and postmodemism and use these methods to analyze rhetorical texts such as television shows, movies and magazine advertisements.

## 40 American Public Address

Analysis of the history of major speeches in America, with an examination of a broad range of historical and rhetorical factors that influenced the construction and reception of speeches from the colonial period through the end of the twentieth century. The course focuses upon such issues as what ideas framed and motivated these speeches, which political ideologies and cultural beliefs shaped the minds of those hearing the speeches, and how these rhetorical texts changed the course of American history.

## 42 Political Communication (4)

Study of the history of modem public life and how the transformation of political ideals, social and economic institutions, and the media have changed the character of political discourse. The course examines how the changing relationships between state governments, political parties, special interest groups and social movements affect political discourse. Also examines ways in which contemporary communication theory attempts to move beyond both liberalism and Marxism to analyze and reconstruct modern political life.

## 44 Organizational Communication (4)

Study of communication within organizations and between organizations and the public, with primary emphasis on the effects of various forms of hierarchical and participatory decision-malting systems on the communicative relationships between employers, employees and the public. Also examines a series of essays and case studies that focus on a variety of issues relating to organizational communication, such as analyzing corporate culture and resolving ethical dilemmas in the workplace.

## 46 Rhetoric and Communication (4)

Survey of the major contributions made to rhetorical and communication theory from the classical period to the present. The course examines such topics as the classical debate between philosophy and rhetoric, rhetoric's role in the civic life of the

Renaissance, the decline and rebirth of the study of rhetoric in the modern period, and contemporary discourse and communication theory. Readings include selections from Plaro, Aristotle, Cicero, Nietszche, Burke, Foucault and Habermas.

80 Independent Study (4)
Qualified students study and/or perform research in a specific subject or theory of communication under the supervision of a faculty member. Students are required to do intensive reading and research in their subject, meet with their faculty supervisor on a regular basis, and write an extensive paper and give an oral presentation on their work.

83 Individualized Internships (4)
Internship in the field of communication. Students have an opportunity to study the communicative practices employed in such settings as a television or radio station, newspaper, magazine, or public relations or advertising firm. Students must work at least 150 hours at their internship site, meet regularly with both their workplace and faculty advisors to discuss issues relating to their internships, and submit a $\log$ of their activities, a portfolio of their work (i.e., documents, news articles, videos), and an academic paper on a topic relating to their work.

95 Special Topics (4)
Detailed study of a specific topic in communication studies.


## Computer Science

Pi-ofessors: Abernethy, Allen (Chair), Nanney, Porter
Associate Professor: Treu
Assistant Professors: Gabbert, Healy, Sylces Instructor: Catron

Computer science courses do not satisfy the General Education requirement in the natural sciences. The Department of Computer Science offers a major in computer science and participates in two interdisciplinary majors, computer science-mathematics and computing-business, in cooperation with the Department of Mathematics and the Department of Economics and Business Administration, respectively. Students interested in any of these majors should consult with the chair of the Department of Computer Science.

## Computer Science Major

To graduate with a major in computer science, a student must have at least a 2.0 grade-point average for all courses taken in computer science.

Combuter science maiors must take Computer Science 11, 12, 22 (or Mathematics 28), $25,30,44$, either 75 or 85 , and three additional courses chosen from computer science courses beyond 30 or mathematics courses beyond 33 (excluding Mathematics 60). Mathematics 11 and 12 are required.

## Computer Science-Mathematics Interdisciplinary Major

To graduate with a major in computer sciencemathematics, a student must have at least a 2.0 grade-point average for all computer science courses taken and at least a 2.0 grade-point average for all inathematics courses taken (excluding Mathematics $10,17,31,32$, and 33 ).

Majors must talce Coinputer Science 11, 12, 22 (or Mathematics 28), 30, 44, and 49 plus Mathematics 11, 12, 21, 22, 34, and one of 28, 37 , or 40 .

## Computing-Business Interdisciplinary Major

To graduate with a major in computingbusiness, a student must have at least a 2.0 grade-point average for all computer science courses and at least a 2.0 grade-point average
for all courses taken in accounting, business administration. and economics numbered 11 or above. Computing-business majors must take Economics 11 (or 21 and 22) as part of the General Education requirements in the social sciences.

Computing-business majors must talce Computer Science 11, 12, 22 (or Mathematics 28), 35, 40 and 41; Economics 25; Accounting 23 and 24: Business Administration 37 and 51; and either Business Administration 32 or Economics 56 (if Economics 11 is taken in place of 21 and 22).

CS is the prefix for computer science courses on schedules and transcripts.

11 Introduction to Computer Science I (4) Algorithms, programs and computers. Basic programming and program structure. Debugging and verification of programs. Survey of computers, languages, systems, and applications. (Lab fee required.)

12 Introduction to Computer Science II (4) A continuation of Computer Science 11. Emphasis on use of data structures to model and implement algorithms as computer programs. Principles of high-level program analysis and design. (Labfee required.)

16 Introduction to Computing (4) A survey of the central ideas, concepts, and implications of computing. Discussions of hardware, soft. ware, problem-solving using high-level software applications. Individual offerings of the course may focus on the impact of computing in a particular discipline or area with a project required in the focus area. Consult the Department's web page for the current listing of offerings. (Labfee required.)

21 Topics in Programming (2) Prerequisite:Computer Science 12.
An intensive tutorial in the fundamentals of programming with a selected symbolic programming language. The choice of language varies. Class lectures, self-paced study, laboratory activities, programming projects. May be repeated for up to eight hours credit, but the study of any one language may not be repeated. (Labfee required.)

## 22 Discrete Structures for Computer

 Science (4)Prerequisite: Computer Science 11 and a General Education Mathematics course.
Introduction to induction, recursion, Boolean algebra and switching theory, directed and undirected graphs, finite state machines and formal languages.
Winter term.

## 25 Computer Organization (4)

Prerequisite: Computer Science 11.
Computer structure, machine language, instruction execution, addressing techniques and digital representation of data. Computer systems organization and logic design. Several computer projects. (Lab fee required.)
Spring term.

## 30 Information Structures (4)

Prerequisites: Computer Science 12, 22.
Basic concepts of data. Linear lists, strings, arrays and orthogonal lists. Representation of trees and graphs. Multilinlced structures. Analysis of the time and space complexity of several important algorithms. (Lab fee required.)
Spring term.

## 31 Microprocessors (4)

Prerequisite: Computer Science 25.
Microprocessor hardware and software fundamentals. Comparison of several microprocessors and their relative capabilities. Several projects. (Lab fee required.)

## 32 Computer Architecture (4)

Prerequisite: Computer Science 25.
The design and structure of modem computers.
The evolution of computer architecture, processor design, information storage, and operating system organization. Several projects. (Lab fee required.)

## 33 Artificial Intelligence

Prerequisites: Computer Science 12, 22. A study of methods and models for making a computer display behavior that would be considered intelligent if done by a human. (Lab fee required.)

## 34 Computer Graphics and Image <br> Processing (4)

Prerequisites: Computer Science 12, 22.
Fundamentals of computer graphics and image processing. Topics include: mathematical representations for scaling, rotation, translation and projection on viewing plane. Major project requires design and implementation of a three-dimensional graphics display system. (Lab fee required.)

## 35 Software Design (4)

Prerequisite: Computer Science 12. Principles of design of large computer programs and systems of programs. Topics include file structures and advanced features of businessoriented languages. (Lab fee required.)
Spring term.

36 Programming Languages Structures Prerequisite: Computer Science 12. Study of several programming languages including specification of syntax and semantics. Global properties of algorithmic languages. Several programming projects. (Lab fee required.)

40 Data Base Management Systems
Prerequisite: Computer Science 12.
Fundamental principles of data base models and data base management systems design, implementation, and application. (Lab fee required.) Fall term.

## 41 Systems Analysis (4)

Prerequisite: Computer Science 12.
A study of the principles involved in the design and implementation of computer applications. Topics include problem analysis techniques, documentation standards, prototyping and fourthgeneration languages, and organizational impact of information systems. (Lab fee required.)
Winter term.

## 44 Computational Theory (4)

Prerequisites: Computer Science 12, 22.
Introduction to topics in computability, automata and formal language theory. Applications of these concepts to various areas of computer science. Fall term.

49 Introduction to Numerical Analysis
Prerequisites: Computer Science 11, Mathematics 12.
Introduction to the numerical algorithms fundamental to mathematical and scientific problems. (Lab fee required.)

75 Seminar in Computer Science
Prerequisite: junior or senior standing.
Students prepare papers on topics drawn from research journals in computer science and give oral presentations on articles read.

## 80 Independent Study (4)

85 Research in Computer Science
Prerequisite: permission of instructor.
Theoretical or laboratory research in computer science with potential for publication in professional journals or presentation at professional meetings. Results are presented to a thesis committee for evaluation. By arrangement, any term.

95 Special Topics in Computer Science

## Earth and Environmental Sciences

Professors: Garihan, Ranson (Chair), Sargent Assistant Professors: Andersen, Christensen

Courses which satisfy the General Education requirements are Earth and Environmental Sciences 11, 16, 18 and 21.

## Majors

Three major traclts exist in the Department of Earth and Environmental Sciences: B.S. in Geology, B.S. in Earth and Environmental Sciences, and B.A. in Earth and Environmental Sciences.

Candidates for the B.S. degree in Geology must talte Earth and Environmental Sciences

11 or 16 or 18 as an introduction to the major; Earth and Environmental Sciences 26, 32, 35, $36,41,42$, and 80 or 85 , plus three additional courses in the department numbered 30 or above; and Chemistry 11 and 12.

Candidates for the B.S. degree in Earth and Environmental Sciences must take Earth and Environmental Sciences 11 or 16 or 18 as an introduction to the major; Earth and Environmental Sciences 26, 32, 35, 36, 41, 42, 45,47 , and 80 or 85 , plus one additional course in the department numbered 30 or above; Chemistry 11,12 , and 21 ; and Biology 11 and 32 . In addition, there are specific suggestions for humanities and social science General Education requirements; see the department chair.

Candidates for the B. A degree in Earth and


Environmental Sciences must talce Earth and Environmental Sciences 11 or 16 or 18 as a General Education requirement; Earth and EnvironmentalSciences 21, 26, 32, 35 or 36, and 45 , plus two additional courses in the department numbered 30 or above; Chemistry 11 or 16 ; Biology 11 or 16 ; and Math 11 or 16 or 17 .

Students anticipating graduate study and professional work in earth and environmental sciences should obtain the B.S. degree. The following are strongly recommended: Mathematics 12 and Phvsics 11 and 13.
B.S. candidates' must talce the Graduate Record Examination, including the geology section, and report the scores to the Department of Earth and Environmental Sciences.

EES is the prefix for Earth and Environmental Sciences courses on schedules and transcripts.

## 11 Earth Systems (4)

An introduction to Earth as an evolving, integrated, and cyclic system. Examination of major surficial and internal Earth processes that shape the human environment and control the distribution of geologic resources such as water, fossil fuels, strategic minerals, and soils. (Lab fee required.)

16 Earth Systems History (4)
Study of how planet Earth's environment has changed with time. Examination of climate variations over Earth history and how Earth has responded to major events such as assembly of super continents and the origin of life. In essence, the study of Earth's past may be the key to predicting constraints on future, human-induced global change. Course has different emphasis than EES 11, but can be a starting point for Earth and Environmental Sciences majors. (Lab fee required.)

18 Introduction to Oceanography (4)
Examines basic concepts in oceanography and marine geology, including oceanic circulation, plate tectonics, sea level rise, waves, tides and currents. Special emphasis is placed on the coastal environment and human impact. (Lab fee required.)

## 21 Environmental Science (4)

Study of biogeochemical cycles and human modification of the natural Earth system. Includes consequences such as natural hazards, depletion of resources, waste disposal and pollution, population and the environment; and environmental regulation. (Lab fee required.)

## 26 Process Geomorphology (4)

Prerequisite: Earth and Environmental Sciences 11 or 16 or 18 or 21 .
Introduction to the physical and chemical processes
and their mechanics that operate within the Earth's surficial systems to govern landform development.
Includes quantitative analysis of geomorphic data in an interdisciplinary context, with emphasis on the interpretation of process. (Lab fee required.)

## 32 Mineralogy and Petrology I

Prerequisites or corequisites: Earth and
Environmental Sciences 11 or 16 or 18 and
Chemistry 11, or permission of instructor.
Introduction to minerals as basic Earth materials in terms of their physical and chemical properties, use, environmental importance and stability, including their identification in hand specimen. Investigation of mineral assemblages found in igneous, metamorphic and sedimentary rocks in order to understand their origin, evolution and use. Field trips required. (Lab fee required.)
Fall term.
35 Mineralogy and Petrology II (4)
Prerequisite: Earth and Environmental Sciences 32. Corequisite: Chemistry 12.
Advanced studv of minerals with emohasis on the crystallography, crystal chemistry and optical properties of silicate minerals. Advanced study of igneous and metamorphic roclcs with emphasis on the integration of field, geochemical and optical techniques to determine their conditions of formation and evolution. Field trips required. (Lab fee required.)

## 36 Structural Geology (4)

Prerequisites: Earth and Environmental Sciences 11 or 16 or 18, Mathematics 10 or equivalent.
Origin and description of folds, faults and fractures. Behavior of earth materials under stress. Analysis of stress and strain. Modem structural concepts. Several field trips required. (Lab fee required.) Fall term.

40 Paleontology (4)
Morphology, evolutionary relationships and paleoecology of organisms common in the fossil record. (Lab fee required.)
Fall term.

## 41 Sedimentation and Sedimentary Petrology (4)

Prerequisite: Earth and Environmental Sciences 11 or 16 or 18 or permission of instructor.
Principles of sedimentology, sedimentary processes, and depositional environments. Description, classification, and interpretation of sedimentary roclcs. (Labfee required.)
Winter term.

## 42 Stratigraphy (4)

Prerequisite: Earth and Environmental Sciences 41. Analysis of rock sequences leading to development of a history of the earth. Emphasis on the stratigraphy of North America. (Lab fee required.) Winter term.

## 44 Optical Mineralogy (4)

Prerequisite: Earth and Environmental Sciences 32. Introduction to optical theory and the petrographic microscope. Identification and significance of common rock-forming minerals in immersion mount and thin section. (Lab fee required.)
Winter term.

## 45 Hydrogeology (4)

Prerequisite: Earth and Environmental Sciences 11 or 16 or 18 or permission of instructor.
Study of the hydrologic cycle, the groundwater system, principles of groundwater flow, groundwater quality, monitoring and management techniques, and computer modeling techniques. (Lab fee required.)
Spring Term
46 Igneous and Metamorphic Petrology (4) Prerequisite: Earth and Environmental Sciences 44. Phase equilibrium and its bearing on the formation and differentiation of igneous roclcs. Metamorphic reactions and processes related to the formation of metamorphic roclcs. Description and interpretation of igneous and metamorphic rocles in thin section. One field trip required. (Lab fee required.)

47 Engineering Geology
Prerequisites: Earth and Environmental Sciences 35, 36.
Theory and applied aspects of engineering geology; rock strength, soil mechanics, and slope stability studies; geophysical methods and remote sensing techniques as applied to problems in geological engineering. (Lab fee required.)

50 Ore Deposits (4)
Prerequisite: Earth and Environmental Sciences 35. Mineralogy, geochemistry and geologic associations of ore deposits. Geochemical and geophysical methods of exploration. Ore minerals in hand specimen and polished section. Several field trips. (Lab fee required.)

52 Geochemistry (4)
Prerequisite: Earth and Environmental Sciences 35. Distribution of the elements and geochemical evolution of the earth and solar system. Isotope geochemistry. Chemical equilibrium in igneous, metamorphic, and sedimentary environments.
Application of thermodynamics to geologic systems. (Lab fee required.)

## 54 Petroleum Geology (4)

Prerequisite: Earth and Environmental Sciences 36. Origin, migration, accumulation of and exploration for hydrocarbons. (Lab fee required.)

## 55 Marine Geology (4)

Prerequisites: Earth and Environmental Sciences 41 and 42 , or permission of instructor.
Integrated study of stratigraphy, sedimentology, plate tectonics, paleoceanography and
paleoclimatology. The structure, evolution and effect of basin development on oceanic circulation and climate through time, the various marine environments, and the techniques of marine data acquisition and interpretation are explored. (Lab fee required.)

56 Regional Tectonics (4)
Prerequisite: Earth and Environmental Sciences 36. Emphasis on the history of the tectonic development of North America as demonstrated by structure and stratigraphy. (Lab fee required.)

58 Environmental Systems (4)
Prerequisites: Permission of instructor; Biology 11 or Chemistry 11 or Earth and Environmental Sciences 11.
Same as Biology 58. Interdisciplinary examination of the physical, biological and chemical processes that control the flow of matter and energy in surface environments on planet Earth. Emphasis on the interactions between abiotic and biotic processes. Lab includes field studies and weelcend trips. (Lab fee required.)

## 59 Field Study of Regional Geology (2-4)

Prerequisite: Earth and Environmental Sciences 35.
Field examination of lithologic and structural relationships and ore deposits to demonstrate the geologic history of a specific region of North America. Normally offered as a summer session course, which includes a two- to three-week field trip to the region being studied. (Lab fee required.)

## 75 Seminar in Earth and Environmental Sciences (1-4)

80 Directed Independent Study (2-4) A topic of special interest selected by the student and a faculty member with whom the student chooses to work. The study is done mostly with geologic literature. Results of the investigation are reported in a paper written according to the style and format of professional geologic publications. The grade will depend largely on the initiative of the student.

85 Research in Earth and Environmental Sciences (4)
Similar to Earth and Environmental Sciences 80, but the investigation involves laboratory and/or field work. Results of the research are reported as in Earth and Environmental Sciences 80. The grade will depend largely on the initiative of the student. (Lab fee required.)

95 Special Topics in Earth and Environmental Sciences (4)
(Lab fee required.)

## Economics and Business Administration

Professors: Alford, Cunningham, Homey, Kessler, Roe (Chair), Stanford
Associate Professors: Arnold, Brown, Patterson, Peterson, Summers
Assistant Professors: Khandlce, Pierce, Roberson, Yankow
Economics 11,21 and 22 satisfy the General Education requirement in the social sciences.

## Majors

The department offers majors in economics, business administration and accounting, and participates in two interdisciplinary majors: mathematics-economics (jointly with the Department of Mathematics) and computingbusiness (jointly with the Department of Computer Science).

Except for identical required courses, courses taken to satisfy one of these majors may not be used to satisfy another of these majors. To graduate with any of these majors, a student must have a 2.0 grade-point average for courses used to satisfy the major requirements in each department. In addition, students must complete Mathematics 11 or 11S. A student who completes a course in statistics at another institution must pass an equivalency examination to receive major credit for Economics 25.

Majors who have received credit for Economics 21 or 22 (but not both) prior to September 1999 must take the other of the two during academic year 1999-2000. Neither Economics 21 nor 22 will be offered after spring term 2000. Majors who have not received credit for either Economics 21 or 22 prior to September 1999 must take Economics 11.

Economics majors must take Economics 11 (or Economics 21 and 22); Economics 25, 31, 45,46 ; Accounting 23; and four (or three with Economics 21 and 22) additional economics electives numbered 30 or above.

Business administration majors must talce Economics 11 and one course from Economics 34, 38, 46, 48, 50, 52, or 56 (or Economics 21 and 22); Economics 25; Accounting 23, 24; Computer Science 16; Business Administration 32, 37, 51, 76; and three additional courses in the department numbered 30 or above.

Accounting majors must take Economics 11 (or Economics 21 and 22); Economics 25; Accounting 23, 41, 42, 43, 45, 46, 47; Computer Science 16; Business Administration 51; and two electives in the department numbered 30 or above (one of which must be in economics if Economics 11 was taken).

Most states require applicants for the CPA examination to complete 150 semester hours of undergraduate or graduate course work, including specified study in accounting and business. Students interested in becoming a CPA should consult a faculty member in accounting to design a program of study.

Mathematics-Economicsmajors must take Economics 11 (or Economics 21 and 22); Economics 31, 45, 46; two electives in economics numbered 30 or above; Mathematics 11 or $115,12,21,34,37,47$; one elective from Mathematics 22, 28, 40, and 41. Majors are advised to take Computer Science 11 and 49.

Computing-Business majors must take Economics 11 and either Business Administration 32 or Economics 56 (or Economics 21 and 22); Economics 25; Accounting 23 and 24; Business Administration 37 and 51; and Computer Science 11, 12, 22 (or Mathematics 28), 35, 40, and 41.

ECN is the prefix for economics courses on schedules and transcripts; BA is the prefix for business administration courses; ACC is the prefix for accounting courses.

## Economics

## 10 Personal Finance (4)

Prerequisite: At least junior standing. Consideration of personal income, expenditures, borrowing, savings and investments. (Students majoring in this department or in the department's interdisciplinary majors may not receive credit toward the major for this course.)

## 11 Introduction to Economics (4)

 Introduction to the essential concepts of economic analysis and implications for public policy. Emphasis on examining the operation of markets in both a macro and micro setting. Topics include inflation, unemployment and monetary policy as well as consumer behavior, the operation of business firms, and supply and demand. (Not available to students who have received credit for either Economics 21 or 22.)21 Macroeconomic Principles (4) Introduction to the study of the operation of the economy as a whole. Analysis of theories of government expenditure, tax policy and monetary
policy as tools to promote economic stability. Topics include national income accounting, unemployment, inflation, money supply and interest rates, and the national debt. (Available only to students who received credit for Economics 22 prior to September 1999.)

## 22 Microeconomic Principles (4)

Introduction to economic analysis focusing on individual units (households, firms and industries) or individual markets in the economv. The role of the price system in explaining behavior of these units and applications of price theory to current microeconomic issues. (Available only to students who received credit for Economics 21 prior to September 1999.)

## 25 Statistics (4)

Methods of presenting, summarizing and interpreting data. Probability and probability distributions, sampling theory, parametric tests, regression and correlation. and time series analy̧sis. (A student who completes a course in statistics at another institution must pass an equivalency examination to (a) receive major credit for Economics 25 or (b) receive credit which would enable the student to take an upper-level course for which Economics 25 is a prerequisite.)

## 31 Empirical Methods in Economics (4)

 Prerequisites: Economics 11 (or Economics 21 and 22); Economics 25 or Mathematics 30 or Mathematics 47; Mathematics 11 or 11 S .Introduction to the methods of preparing and analyzing data for economic research. Students become familiar with the basic empirical methods used by economists, particularly regression analysis. Computer software paclcages used extensively.

## 33 Economics of Gender (4)

Prerequisites: Economics 11 (or Economics 21 and 22).
Examination of the significance of gender differences in the U.S. economy. Topics include differences in earnings and occupational choice, discrimination, consequences of women's employment for the family, and the feminization of poverty.

## 34 Urban Economics (4)

Prerequisites: Economics 11 (or Economics 21 and 22).

Survey of economic analysis in its application to urban problems. Causal factors creating urban dilemmas and the policy alternatives available for improving the quality of urban life. Impact of environmental, social and political issues on economic solutions to urban problems.

## 38 Public Finance (4)

Prerequisite: Economics 11 or 22.
Microeconomic analysis of government expenditure and tax policies, with attention to social security, national health insurance, welfare programs, individual income tax and other current topics.

## 41 Money and Banking (4)

Prerequisite: Economics 11 or 21.
Institutional and historical study of the nation's monetary system, including definition of money, an overview of the financial markets, activities of the nonbank intermediaries, the banking system, and central banking. Analysis of effects of money and finance on output, prices and economic growth.

A43 Economic Growth and Development Prerequisites: Economics 11 (or Economics 21 and 22).
Survey of the theory of economic development, the historical development experiences of advanced Western, Asian and African nations, the problem of accelerating rates of development of less advanced nations, and the problem of maintaining economic growth rates of advanced nations.

45 Intermediate Macroeconomic Analysis Prerequisites: Economics 11 and an additional economics elective numbered 30 or above (or Economics 21 and 22); Mathematics 11 or 11S. Theory course which concentrates on both shortand long-run macroeconomic models. Analysis of monetary and fiscal policies and their effectiveness in targeting aggregate measures of unemployment and inflation under closed and open economy regimes.

46 Intermediate Microeconomic Analysis
Prerequisites: Economics 11 and an additional economics elective numbered 30 or above (or Economics 21 and 22); Mathematics 11 or 11S. Operation of the price system and its role in understanding the behavior of individual economic units: consumers, producers, and suppliers of resources. Applications of price theory to contemporary microeconomic problems.

47 History of Economic Thought (4) Prerequisites: Economics 11 (or Economics 21 and 22).
Development of economic thought from Adam Smith through the classical, Marxian and neoclassical writers to the present.

## 48 Government and Business (4)

Prerequisites: Economics 11 (or Economics 21 and 22).
Evolution of governmental involvement in the U.S. economy. Special emphasis on the relationship between government and the business community; the structure, behavior and performance of the business community which have induced government response; the interpretation and application of antitrust law; and a brief survey of public utilities and transportation economics.

50 Labor Economics (4)
Prerequisites: Economics 11 (or Economics 21 and 22).
The study of labor markets from both the firms' and workers' perspectives. Trends and relationships
pertaining to the gender, race, age and educational composition of the worlcforce are discussed, as are worlcer mobility, training and productivity. Major policies that affect labor markets (e.g. minimum wage, social security) are also examined.

52 International Trade Theory and Policy
Prerequisites: Economics 11 (or Economics 21 and 22).
Introductory study of international trade theory and policy. A microeconomic perspective of trade models detailing causes and benefits of trade between nations. Consideration of relationship between trade and economic growth and development. Analysis of exchange rate models, spot and forward markets and the balance of payments.

## 56 Managerial Economics (4)

Prerequisites: Economics 11 (or Economics 21 and 22); Economics 25 or Mathematics 30 or Mathematics 47; Mathematics 11 or 11 S .
Extension of economic theory to applications in managerial economics and economic forecasting. Decision optimization techniques; the economic analysis of risk; techniques of demand, cost and production estimation; analysis of pricing and non-price-competitive practices; and forecasting of demand, cost and production variables.

57 Quantitative Methods for Business and Economics (4)
Prerequisites: Economics 11 (or Economics 21 and 22); Mathematics 11 or 11 S .

Mathematical operations and methodology within the context of marlcet models, models of the firm, national income models, and models of economic growth; introduction to mathematical economics, static analysis, comparative statics, optimization problems, dynamic analysis, and linear programming and game theory.

## 80 Independent Study in Economics

81 Economic and Political Analysis of the European Union (4)
Examination of the formation, implementation and operation of the European Union, with special emphasis on political and economic issues. Taught as an interdisciplinary course as part of the Furman program in Europe. The course is listed under both Economics and Political Science. Students may receive credit for only one of the courses.

95 Special Topics in Economics

## Business Administration

31 Management Information Systems (4) Prerequisite: Computer Science 16 (Computer Science 11 for Computing-Business majors).
Study of the role of information in supporting
business operations, managerial decision-malting, and organizational strategy. Topics include technology concepts, internetworlced enterprises, functional area applications, systems development, and effective management of information resources.

32 Operations Management (4) Prerequisites: Economics 25; Computer Science 16 (Computer Science 11 for Computing-Business majors) or Business Administration 31.
Study of the issues associated with the manufacture of products and the delivery of services. Topics include operations strategy, quality management, product and service design, process planning, technology decisions, facility location and layout.

34 Human Resource Management (4)
Human resource planning and management; impact of internal and external forces on the organization's human resources. Experiential exercises and cases relate theory and practice.

## 35 Business Law (4)

Study of law and society; the judicial system; the basic law of contracts, including offer and acceptance, consideration, form of the agreement, defenses, and breach of contract; the law of assignment and third party beneficiary contracts; and the law of agency.

37 Marketing (4)
Prerequisite: Economics 11 or 22.
Survey of the organizational activities that are normally considered within the marlceting area. These include consideration of environmental factors, buyer behavior, marlceting research and market segmentation. Particular attention paid to the development of marlceting strategies relating to product development, communication, distribution, and pricing.

## 38 Marketing Research (4)

Prerequisites: Business Administration 37; Economics 25.
Emphasis on the importance of a marketing information system. The types and sources of information required for marketing planning and decision making. Topics include the research process, techniques, design and methodologies. Concepts applied through case studies or projects in the business community.

## 39 International Business (4)

Prerequisites: Economics 11 (or Economics 21 and 22).
Examination of managerial, marlceting, financial and accounting implications of the international operations of business enterprises. Subject matter stresses the underlying economic principles, institutional and regulatory frameworks, and the environmental and political constraints, with emphasis upon the multinational enterprise.

## 51 Business Finance (4)

Prerequisites: Accounting 23; Accounting 24 or 41 or Economics 31; Economics 25.
Goals of the firm in the context of the financial markets in which it operates. Major emphasis on analyzing the sources and costs of funds available as well as the factors affecting their allocation.

## 53 Financial Institutions (4)

Prerequisites: Economics 11 or 21; Accounting 23. Investigation of the nature of the funds sources and asset preferences of the major financial institutions, as well as an overview of the financial markets within which they function. Point of view is that of decision malcers operating within the institutions.

## 55 Investments Management (4)

Prerequisites: Economics 11 or 21; Accounting 23; Economics 25.
Study of various investment alternatives along with the nature of the markets in which they are traded. Primary emphasis on security analysis and portfolio composition as well as matching portfolios to investment objectives.

70 Experiential Learning in Business (4)
Provides upperclassmen with opportunities to apply the concepts they have studied in the department. Students spend approximately 20 hours per weelc in a variety of functional positions within local business organizations. Students research and discuss assigned issues at weekly seminars.

76 Senior Seminar in Business
Administration (4)
Prerequisites: Business Administration 32, 37, 51. Capstone course for seniors in business administration. Knowledge from the different functional areas of business is integrated and focused on the solution of complex business problems. Important environmental constraints are also considered. Oral and written communication, based upon student research, are emphasized.

## 80 Independent Study in Business

Administration (4)

## 95 Special Topics in Business

Administration (4)

## Accounting

23 Principles of Financial Accounting (4) Theory and practice of accounting as applied to the proprietorship and corporate forms of business organizations. Analysis of business transactions, valuation of assets and liabilities, determination of income, and preparation and interpretation of financial statements.

24 Principles of Managerial Accounting
Prerequisite: Accounting 23.
The use of accounting information by management
in planning, control and decision-making in business enterprises. Topics include production decisions, activity-based costing, budgeting and standards, and capital investment decisions. (Not available to accounting majors.)

## 41 Intermediate Financial Accounting I

Prerequisite: Accounting 23.
In-depth study of financial accounting standards, the accounting process, and problems related to presenting income statements and balance sheets for business enterprises. Consideration of working capital accounts, noncurrent assets, noncurrent liabilities, and related income statement accounts.

42 Intermediate Financial Accounting II
Prerequisite: Accounting 41.
In-depth study of financial accounting standards and problems related to presenting an enterprise's balance sheet, income statement and statement of cash flows. Topics include stockholders' equity, dilutive securities, tax allocation, pensions, leases and revenue recognition.

## 43 Cost Accounting (4)

Prerequisite: Accounting 41.
Collection and utilization of cost data by management for short-term planning and control purposes. Topics include cost-volume-profit relationships, product-costing methods, flexible budgets, standard cost variances and cost allocations.

## 45 Auditing (4)

Prerequisite: Accounting 42.
Auditing theory integrated with procedures for gathering evidential matter to provide a basis for the auditor's revort on the financial statements of business enterprises. Review of standards, ethics, planning, internal control, procedures and reports.

46 Advanced Financial Accounting
(4)

Prerequisite: Accounting 42.
Study of business combinations and related consolidated financial statement issues, accounting for foreign operations, and accounting problems of partnerships.

47 Federal Income Taxation
Prerequisite: Accounting 23.
Survey of current federal income tax law pertaining to individuals, partnerships and corporations. Focus on compliance matters with supplementary study in tax planning and research fundamentals.

59 Advanced Topics in Accounting
Prerequisite: Accounting 42.
Selected topics in the field of accounting not covered in other courses.

80 Independent Study in Accounting
95 Special Topics in Accounting


## Education

Professors: Cloer, Harris, Heath, Heclcer (Chair), Quast, Ritter, Winstead Assistant Professors: Bell, Crockett, DeJong, Henderson, Svec

The Education Department offers a major in education (grades 1-8), preparation for licensure in grades 1-8, and preparation for licensure in an approved academic discipline for grades 7-12 or K-12. General Education courses that are required include Psychology 21 and Education 20 (meeting the social sciences requirement), a biological and a physical science course with lab/applied experience (meeting the sciences requirement) and, in the case of the education major, Mathematics 31,32 and 33 (meeting the mathematics requirement). Philosophy 20 is highly recommended as a means of satisfying the upperlevel humanities requirement.

## Teacher Education Program

## Program Accreditation

As a university preparing students for careers in public education and related professions, Furman is subject to regulations and guidelines established and implemented by the South Carolina Department of Education and the National Council for Accreditation of Teacher Education (NCATE). Programs judged to meet the national and state standards receive "program approval" status. Students who satisfactorily complete the requirements for licensure become eligible for a teaching certificate in South Carolina and other states with reciprocal arrangements. In efforts to continually renew and improve teacher education, regulations and standards governing teacher preparation programs periodically change, and the programs of students admitted into the Teacher Education Program are subject to those changes.

## Purpose

The mission of Furman's Teacher Education Program is to prepare scholars and leaders who will teach content using effective pedagogy, reflect critically on the practice of teaching, promote human dignity, and exemplify ethical and democratic principles. To fulfill this
mission, Furman is committed to a program of teacher education that calls for collaborative, interdependent efforts throughout the academic community. This commitment is anchored in the university's belief in the importance of the liberal arts - encompassing the humanities, fine arts, mathematics, and social and natural sciences - as an essential foundation for developing intellectually competent educators.

In keeping with this mission, the Teacher Education Program promotes the following beliefs:

- In-depth knowledge of a discipline undergirds teaching competence.
- Successful educators model effective pedagogy.
- Engaged teaching and learning require reflective and creative thought, critical analysis and strategic action.
- Support for the ongoing intellectual development of faculty is essential for effective teaching and scholarship.
- The preparation of educators in a climate of respect counters prejudice and heightens understanding.
- Civil discourse and free speech depend on respect for different viewpoints.
- Developing effective, dynamic leaders is necessary for an ethical and democratic society.

The Teacher Education Program also incorporates seven themes in its effort to prepare strong educators:

- Knowledge of subject matter;
- Philosophical, historical, and sociological foundations of education;
- Human development and learning;
- Social/cultural relationships and experiences;

Curriculum development and integration, assessment, instruction, and use of technology;

Critical inquiry and reflection on teaching and learning;

- Leadership development.


## Admission

All who wish to major in education, or who wish to seek licensure in grades 1-8 or in approved subject areas in grades K-12 or 7-12, must be formally admitted into the Teacher Education Program after completing the prerequisite requirements. These requirements must be met prior to enrolling in upper-level
education or subject-specific methods courses and in the teaching internship. Application materials are available in the Department of Education and will be submitted for review in November or April of the sophomore or junior year.

The prerequisites to admission are:

- Credit for Psychology 21 (prerequisite to Education 20).

Grade of "C" or above in Education 11, Education 20 and Education 21, and satisfactory completion of Education 01 field experience.

- Satisfactory completion of supervised writing sample completed during Education 11.
- Grade of "C" or above in Computer Science 16 (or equivalent course).
- Meet minimum scores mandated by the South Carolina State Board of Education on the Pre-Professional Skills Tests (PPST, Praxis I) in reading, mathematics and writing.
- Recommendations from Education 11, 20 and 21 professors.
- Recommendation from a General Education professor (excluding Education).
- Recommendation from the major
department (for candidates majoring outside of Education).
- Cumulative grade-point average of at least 2.5 , and a minimum grade-point average of 2.5 in the major.
- Clearance from the Office of Student Services.
- Demonstration of ethical and professionally responsible behavior.
- Recommendation documenting at least 50 hours of independent and supervised work with children/youth.

Continuation in the Teacher Education Program is based on the following:

- Grades of "C" or above in all professional education courses (including those required in art, drama, health and exercise science, mathematics and music).
- Maintaining an overall grade-point average of 2.5 , and a minimum grade-point average of 2.5 in the major.
- Satisfactory completion of Education 02 field experience.
- Continued demonstration of ethical and professionally responsible behavior.



## Licensure Requirements

Furman University offers teaching licensure programs in the following areas:

Elementary Education Grades 1-8
Early Childhood Education Grades K-4*
Secondary Education
(Biology, Chemistry, English, French, German, Latin, Mathematics, Physics, Social Studies, Spanish)
Art, Drama, Music, and Physical Education

Grades K-12
Special Education Grades K-12*

* Area of licensure added, on the graduate level, to the elementary licensure (refer to pages 137-141 under Graduate Studies).

Students wishing to seek eligibility for a teaching licensure in grades 1-8, K-12 or 7-12 must satisfactorily complete the approved requirements for the education or academic discipline major and the teaching internship. Music Education and Physical Education licensure programs may be completed within the undergraduate four-year baccalaureate program. All other programs for teaching licensure must be completed on a postbaccalaureate basis. This means the teacher candidate will graduate after four years with a baccalaureate degree in the major. Completion of the teaching internship (Education 171) and the concurrent Inquiry and Research in the Classroom (Education 167) courses occur on the graduate level during the following fifth year. Graduate hours accrued during the fifth year may (in most cases) be applied toward a master's degree.

Students must apply for admission into the teaching internship. Admission is based upon a coinposite of the following:

- Cumulative grade point average of 2.5 and a minimum of 2.5 in the major.
- Completion of a developing professional portfolio.
- Interview with one or more practicing professionals.

Students are required to pass the Praxis II Examination administered by the Educational Testing Service. Passing scores must be on file at Furman before a recommendation for a teaching certificate can be made.

## Education Major With Licensure for Teaching

The education major with licensure consists of the following courses: Art 58; Theatre Arts 60; Education 01, 02, 11, 20, 21, 30, 31, 32, 33 , 40, 41, 42 ; Health and Exercise Science 32, 39; Mathematics 31, 32 and 33; Music 69; and a minimum of 12 hours of in-depth study in one of the academic disciplines related to the teaching of subject matter.

Senior Block: During the spring of the senior year, majors enroll in three coursesEducation 40, 41 and 42. These are teamtaught by education faculty in one block that includes at least two full days of field experiences in the schools.

## Education Major as Preparation for Non-Teaching Fields

Students who seek non-teaching careers related to the education of children/youth (e.g. child life, camps, religious education) may choose to major in Education without completing the licensure program. Education 11, 01, 20 and 21 are required. A minimum recuirement of five additional three- to fourhour courses that would fit the career or graduate study goals of the student will be determined, under the advisement of the department chair and with approval of the Education Department faculty.

## Education Courses

The undergraduate education courses for the major and for other licensure programs are listed.
ED is the prefix for education courses on schedules and transcripts.

## 01 Education Laboratory I (0)

For prospective teachers and for students exploring education as a career possibility.
Observations in different school settings for the purpose of becoming acquainted with the school and with the classroom. Required in conjunction with Education 11.

02 Education Laboratory II
Prerequisite: Education Lab I.
Application of teaching methods and participation as a teaching assistant for the purpose of gaining
instructional experiences that are closely supervised by the classroom teacher. Required in conjunction with Education 30, Education 50, Health and Exercise Science 33 and 36, and Music 60 and 61.

11 Perspectives on American Education Introduction to teachers and teaching, the American school in an increasingly diverse society, and the historical, sociological and philosophical foundations of education. Education 01 is required in conjunction.

## 20 Human Development (4)

Prerequisite: Psychology 23. (Students may not receive credit for both Education 20 and Psychology 23).

Physical, cognitive, social and emotional aspects of development, from conception through older adulthood, with applications for parenting and teacher education.

## 21 Education of Students with

 Exceptionalities (4)Prerequisites: Education 11, 20.
Characteristics of persons with exceptionalities, implications for teaching and learning, and applications of special education procedures and services. Extensive field experiences are incorporated.

22 Nature of Learning Disabilities Prerequisites: Education 11, 20, 21.
Designed to teach students the history of the field of learning disabilities, related educational theories, available educational services, and appropriate strategies for working with individuals with learning disabilities. Field-based experiences are incorporated.

## 23 Nature of Emotional/Behavioral

 Disorders (4)Prerequisites: Education 11, 20, 21. Study of individuals with emotional/behavioral disorders, major theoretical perspectives, and current issues and research. Factors which interrelate with emotional/behavioral disorders (community, school, family) are considered, and appropriate intervention strategies are studied. Field-based experiences are incorporated.

## 24 Nature of Mental Retardation

Prerequisites: Education 11, 20, 21.
Lifespan survey of characteristics, needs and special programs for persons with mental retardation. Course includes the social and cultural conceptualization of mental retardation, etiology, identification and placement, and current trends. Field-based experiences are incorporated.

25 Behavior of the Young Child
Prerequisites: Education 11, 20, 21.
Study of the child from birth to age eight, with field-based opportunities for observing, recording
and interpreting development and behavior of young children.

30 Reading and Writing in Grades K-8 (4) Prerequisites: Education 11, 20, 21.
The place of reading in the total elementary and middle school curriculum, the developmental nature of language and reading ability, and materials and practices associated with reading instruction. Education 02 is required in conjunction.

31 Language Development and Children's Literature in Grades K-8 (4)
Prerequisites: Education 11, 20, 21, 30, or permission of instructor.
Comprehensive look at the language arts program in the elementary and middle school. Language acquisition, teaching of grammar and usage, oral and written composing and children's literature.

32 Social Studies in Grades K. 8
Prerequisites: Education 11, 20, 21.
Knowledge of the elementary and middle school social studies curriculum, teaching strategies and materials, and field-based application in area schools.

33 Science in Grades K-8 (4) Prerequisites: Education 11, 20, 21.
Knowledge of the elementary and middle school science curriculum, teaching strategies and materials, and field-based application in area schools.

35 Organization and Curriculum in the Middle School (4)
Prerequisite: Education 11, 20, 21.
Developmental tasks of middle school students; organization and sequence of the instructional program; staff characteristics, patterns, services, home-school-community relations; management and evaluation of middle schools.

36 Teaching Reading in the Content Areas
Prerequisites: Education 11, 20, 21.
Designed for prospective and practicing school teachers, with practical suggestions for the reading specialist and the content teacher.

40 Assessment for Instructional Planning
Part of the Senior Block, spring term.
Introduces teacher candidates to the processes of assessment and the use of assessment information to develop appropriate educational programs for all students in grades K-8. Emphasis on formal, informal and authentic assessment measures and their use to plan appropriate instruction that affects teaching and learning.

41 Diverse School Cultures: Teaching, Learning and Management (4)
Part of the Senior Block, spring term.
Deepens understanding of diversity in elementary
and middle school cultures. Classroom and school communities that embrace diversity studied through analysis of attributes and practices of successful educators. Instructional and management strategies that encourage learning, sensitivity and socialization developed through integrated clinical and field experiences.

42 Integrating Curriculum and Technology in Grades K-8 (4)
Part of the Senior Block, spring term. Designed to provide candidates with background for integrating instruction and technology across curriculum. In field-based teams, candidates explore models/theories of curriculum integration and use the thematic approach to unit development. Focus on developing connections across disciplines of science, social studies, mathematics, language arts, and related arts.

## 50 Curriculum and Methods of Teaching in

 Grades 7-12 (4)Prerequisites: Education 11, 20, 21.
Various ways of organizing the curriculum in the secondary school, a comparison of traditional and nontraditional teaching methods, principles of learning, classroom organization, planning units and formal and informal evaluation. Education 02 is required in conjunction.

51 Literature for Young Adults
Prerequisites: Education 11, 20, 21.
Content of the literature program in the secondary school and methods of teaching poetry, short stories, traditional literature and young adult novels.

## 52 Teaching English in Grades 7-12 (4)

Prerequisites: Education 11, 20, 21, 50 (recommended).
Explores in depth two of the major components in the secondary school English curriculum language and composition. Emphasis placed on teaching the writing process. Examines strategies needed to learn from text materials included in the English classroom.

53 Teaching Social Studies in Grades 7-12
Prerequisites: Education 11, 20, 21, 50 (recommended).
Provides in-depth investigation of the methods associated with teaching social studies on the
secondary level. Special emphasis placed on how the social sciences differ from other disciplines, and how differences affect curricular and pedagogical strategies.

54 Teaching Science in Grades 7-12 (4) Prerequisites: Education 11, 20, 21, 50 (recommended).
Teacher candidates become reflective practitioners developing and delivering quality science curriculum. Covered are laboratory safety, instructional strategies, inquiry learning and the learning cycle, curriculum models emphasizing integration, performance assessment, resource evaluation focusing on technology, and field experiences in area schools.

## 75 Teaching Internship (12)

Prerequisites: Completion of major requirements in music education or physical education.
Required of candidates intending to teach. Intern is placed with a mentor teacher in the subject area of prospective licensure. Full-time teaching responsibilities assumed over time. Intern attends weelcly seminars.

## 167 Inquiry and Research in the

 Classroom (3)Required of candidates intending to teach in all areas except music and physical education.
Prerequisites: Completion of a baccalaureate degree in education or an approved academic discipline related to subject area for teaching.
Taken concurrently with the Teaching Internship (Education 171). Identification of an inquiry or research project to be conducted in the internship placement. Regular class meetings to provide background in inquiry and research techniques and development of projects.

171 Teaching Internship (6-12)
Required of candidates intending to teach in all areas except music and physical education. Prerequisites: Completion of a baccalaureate degree in education or an approved academic discipline related to subject area for teaching.
Intern is placed under the supervision of a master teacher, with full teaching responsibilities.
Mentoring by university and school personnel, along with weelcly seminars.
Fall term or full-year options.

## English

Professors: Aarnes, Allen, Bainbridge,
S. Crowe (Chair),Julian, McArthur, Pate,

Radel, W. Rogers, Shacltelford
Associate Professor: Visel
Assistant Professors: Douglas, Hausmann, Menzer, Oaltes, Stulting
Instructors: Brewton, J. Crowe, Hawk, T. Rogers, Smith

To satisfy the General Education requirement in English, all students must take English 11 and are expected to do so in the first year. They are not allowed to preregister for English 11 after the first year. To satisfy the literature requirement in English, students may take one of the following: English 12, 21 or 22. These requirements should be completed before a student takes any other course in English. Note: After consultation with the department chair, a highly qualified student may be permitted to fulfill the General Education requirement by taking advanced courses.

Every English course includes instruction and practice in composition.

## Majors

Majors must take English 21 and 22, at least one seminar (designated with an S in the preregistration schedules), and a minimum of six additional courses. The six additional courses in the major will be selected in consultation with the chair and with the major advisor. The pattern of courses should include work in early English literature, later English literature, and American literature, and should involve the student in studying each of the traditional major genres: poetry, fiction, and drama. English majors are encouraged to include writing courses and/or language courses in their major patterns.

Students who want to teach English in college or in secondary school should plan to take more English courses than the minimum required for the major. Students planning to go to graduate school should work out a major program that will prepare them to do well on the Graduate Record Examination and will make them ready for the demands of graduate study in English.

Majors wishing to pursue a career in teaching must complete Computer Science 16 and Education 11/01, 20, 21,50102, 51, 52,

167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information.

Special opportunities for experience in journalism are available through work on the staffs of the student literary magazine, newspaper, and yearbook. All students working for certification in English are advised to take advantage of these opportunities.

To graduate with a major in English, a student must have a grade-point average of at least 2.0 in a group of courses that satisfies the departmental requirements.

ENG is the prefix for English courses on schedules and transcripts.

11 composition (4)
Though the thematic emphasis in each section varies, all sections focus on expository and argumentative writing, with particular attention to analytical strategies, grammatical correctness, and organizational methods. Students are required to submit a minimum of 16-20 pages of formal writing. A list of section topics from which students may choose is published at the beginning of each term.

12 Reading Literature (4)
All sections focus on reading and analyzing literature, although the texts considered vary. Students are introduced to such concepts as point of view, plot, character, imagery, symbolism, rhyme scheme and dialogue. They may also be introduced to various interpretive approaches, such as feminist, formalist, historical, psychological, or biographical. Written assignments provide practice in clarifying the understanding of literature. A list of texts and approaches emphasized in each section is published prior to each term.

21 British and American Literature to 1798 (4)
A broad survey of English literature of the Middle Ages, the Renaissance and the seventeenth and eighteenth centuries. Authors studied might include Chaucer, Spenser, Donne, Shakespeare, Milton, Dryden, Pope, Swift, Johnson, Bradstreet, Taylor, Franklin, and Edwards. Required essays test students' abilities to employ the standard concepts of literary analysis.

## 22 British and American Literature since

 1798 (4)Survey of the last two hundred years of British and American literature considered in its historical. cultural, and aesthetic contexts. Authors studied might include Wordsworth, Coleridge, Keats, Browning, Tennyson, Hawthorne, Melville, Emerson, Thoreau, Whitman, Diclcinson, Diclcens, T. S. Eliot, Frost, Faulkner, Hemingway, and Fitzgerald. Required essays test students' abilities to employ the standard concepts of literary analysis.

## 31 Advanced Composition (4)

Instruction and practice in writing, analyzing, and evaluating narrative, descriptive, expository, and argumentative essays.

## 32 Writing Poems (4)

The course helps students to become more aware of and more proficient in the craft of poetry. Students should be prepared to write frequently, to duplicate their work for discussion, and to comment upon their classmates' work.

## 33 Writing Fiction (4)

This course helps students to become more aware of and more proficient in the craft of prose fiction. Students should be prepared to write frequently, to duplicate their worlc for discussion, and to comment upon their classmates' work.

34 Journalism: Principles and Practice (4) This course looks at the role of newspapers in society, the strategies for reporting and writing news, and the ethical and legal ramifications of newspaper reporting.

## 35 Business Writing (4)

The course refines the students' grammar, mechanics, and style; develops analytical skills; acquaints students with the numerous formats and organizational plans business writers use; teaches them to compile a formal report incorporating both primary and secondary research; and develops the students' ability to respond critically to business writing.

38 History of the English Language (4) Survey of the internal history of English, reviewing Indo-European and Germanic background and studying the development of phonology, morphology, and syntax from Old English to Modem English.
Not offered in 1999-2000.
39 Modern English Grammar (4) The study of rules for English phonology, morphology, and syntax. Also covered are regional and social dialects, semantics, stylistics, and psycholinguistics.
literature, from Beowulf to Malory. A substantial part of the course is devoted to Chaucer's Canterbury Tales.
Not offered in 1999-2000.
41 Sixteenth Century English Literature (4)

Study of Tudor literature as England began to develop its own religious and cultural identity under powerful male and female monarchs. Poetry, prose, and some drama by Mary and Philip Sidney, Elizabeth Tudor, Thomas Wyatt, Edmund Spenser, William Shakespeare, Thomas Kyd, Christopher Marlowe, and others.
Not offered in 1999-2000.

## 42 Seventeenth Century English

 Literature (4)A study of the literature written during the cultural boom and bust of the Stuart era. Focus is on writers such as Joinn Donne, Aemilia Lanyer, Ben Jonson, Mary Wroth, George Herbert, John Ford, Robert Herrick, Richard Crashaw, and John Milton.

43 English Literature of the Restoration and Eighteenth Century (4)
Study of English literature from 1660 to 1800, with particular emphasis upon satire. Readings in Dryden, Defoe, Addison, Steele, Swift, Pope, Johnson, Boswell, Goldsmith, Steme, and others. Not offered in 1999-2000.

44 British Romantic Literature (4) Study of the poetry of Blake, Wordsworth, Coleridge, Byron, Shelley, and Keats; the critical and occasional prose of Wordsworth, Coleridge, Shelley, Keats, Hazlitt, Lamb, and DeQuincy; the fiction of Austen and Scott.

## 45 Victorian Literature (4)

Study of British literature from Tennyson to Hardy with emphasis on historical, cultural, and aesthetic contexts such as the influence of Darwin and other scientists, changing social mores, and new conceptions of poetic form.

46 Nineteenth Century British Prose
A study of the major English nonfiction prose writers of the nineteenth century. Coleridge, Hazlitt, Carlyle, Ruskin, Newman, Arnold, Mill, Darwin, Huxley, Pater, and Wilde could be among the writers studied. Students read both essays and book-length works.
Not offered in 1999-2000.
47 Early American Literature (4)
Study of American literature from the colonial period through Cooper. Besides focusing on major works by Franklin, Brown, and Cooper, the course considers such forms as the sermon, diary, captivity narrative, and spiritual biography.

48 Literature of the American Renaissance (4) Study of American literature from Emerson through

Diclcinson. Writers considered include Poe, Hawthorne, Melville, Thoreau, and Whitman.

50 The British Novel from Defoe to Trollope (4)
Readings in the British novel from its beginnings in the eighteenth century through Trollope. Includes such novelists as Defoe, Richardson, Fielding, Smollett, Sterne, Austen, the Brontes, Diclcens, Thackeray, Eliot, and Trollope.
Not offered in 1999-2000.
51 The British Novel from Hardy to the Present (4)
Readings in the British novel from the late nineteenth century to the present. Writers studied include Hardy, Conrad, Woolf, Joyce, Lawrence, Burgess, Greene, Lessing, and Drabble.

52 American Novel from Its Beginnings to World War I (4)
An examination of the American novel from its beginnings to the World War I period. Writers studied include Brown, Cooper, Hawthorne, Melville, Twain, James, Wharton, and Dreiser.
Not offered in 1999-2000.
53 American Novel from World War I to the Present (4)
Survey of modern American fiction, involving the reading and discussion of eight to twelve novels. It begins with the post-World War I period, and includes the minority voices of blacks, Jews, and women.
Not offered in 1999-2000.
54 Studies in Short Fiction (4) The short story and the novella are the subjects for discussion and writing. The course will examine the five basic elements of fiction - plot, characterization, setting, point of view, and theme - in an attempt to define the genre of the short story. Stories are selected from different historical periods and different cultural perspectives.
Not offered in 1999-2000.
55 British Drama (4)
Study of major works of English drama, with appropriate attention to relevant critical concepts and problems of staging. Medieval English drama may be read, as well as worlcs by Shalcespeare, Jonson, and their contemporaries. May also include authors from the Restoration as well as from the eighteenth, nineteenth, and twentieth centuries.

56 Modern British and American Drama (4) Study of some of the powerful and varied work of recent dramatists, with attention to the conditions of the theatre of their time. Dramatists studied might include Shaw, Eliot, O'Neill, Miller, Wilder, Osborne, Arden, Pinter, Shaffer, Bolt, Orton, and Shepard.

57 Drama in England (4)
Offered only as part of the Fall Term in England program. Study of the drama being performed in London and Stratford by the Royal Shalcespeare company, the National Theatre and others.

58 Modern British and American Poetry (4) Worlcs by Yeats, Eliot, Frost, Williams, Stevens, and perhaps 15 other poets are read, analyzed, and evaluated. Although poetic theory and the development of modernism are touched upon, the major emphasis is upon the aesthetic qualities of individual poems.
Not offered in 1999-2000.
59 American Autobiography (4) Definition of autobiography through contrast with other biographical forms. Attention to specific subgenres such as the conversion narrative and the slave narrative. Study of recurring subjects such as the importance of reading and writing and of recurring story lines such as geographical, social, and spiritual displacement.
Not offered in 1999-2000.
60 Studies in Chaucer (4)
A chronological reading of the poetry of Chaucer, in Middle English, culminating with Troilus and Criseyde and the Canterbury Tales. Special attention to the develooment of Chaucer's narrative art and his invention of the Chaucerian persona. Chaucer's "modernity"conceived as his self-consciousness about the use of language and his ambivalence about the value of literary art.
Not offered in 1999-2000.
61 Shakespeare (4)
Study of the drama and theatre of England's greatest dramatist, in its historical, cultural and critical contexts. Worlcs from all periods of Shakespeare's career and from all the dramatic genres are studied. Videotapes of selected plays are used to supplement readings and as a basis for discussion.

62 Faullcner (4)
A chronologicalstudy of the development of Faullcner's art from Sartoris to Go Down, Moses. Attention paid both to the development of the concept of YolcnapatawaphaCounty and to the various narrative techniques Faullcner employed.

63 Contemporary American Writers (4) A detailed study of three or four living American writers. Some or all of the writers meet with the class as part of the Meta Eppler Gilpatrick Writers at Furman Series.

64 S Studies in English and American Literature (4)
Course topic changes with each offering. In 19992000, it will focus on the poetry of Edna St. Vincent Millay and Robinson Jeffers.

## 67 Literary Criticism (4)

Study of the theory and practice of literary criticism from Aristotle to the present. Students are advised not to take English 67 until they have taken at least two literature courses numbered 40 or above.
Not offered in 1999-2000.

## 68 Problems of Interpretation: Lyric

 Poetry (4)Study of selected English and American lyric poetry from all major literary periods, medieval to contemporary. Poems are selected to illustrate six characteristic problems of interpretation: voice, audience, medium, reference, diction, and form.

## 70 Arthurian Literature (4)

Study of various treatments of the Arthurian material, including its origin, its fall from popularity in the eighteenth century, and its return in the nineteenth and twentieth centuries. Emphasis on different interpretations and treatments of the materials as an expression of personal and cultural needs. Not offered in 1999-2000.

## 71 Satire (4)

Readings in satirical literature of all genres and many periods, with an emphasis on satire of the early eighteenth and the late twentieth centuries. Some attention to satire in forms other than literature. Focus on function, method, characteristics, and problems of the satirical mode.

72 Literature of the South (4)
Focus on the major writers of the Southern Renaissance-Faulkner, Welty, O'Connor, Penn Warren, and Ransom. Earlier Southern writers may be studied as background, and works by contemporary Southern writers such as Percy and Wallcer are included.
Not offered in 1999-2000.

## 73 Literature of the Irish Renaissance, 1840-1940 (4)

Study of the remarlcable literary flowering contemporary with the late nineteenth-century movements in Ireland that led to the creation of the Irish Free State in 1921, and with the difficult historical circumstances faced by the new nation in the first 20 years of its existence. The major figures studied are Yeats, Joyce, Synge, and O'Casey.
Not offered in 1999-2000.

74 Postcolonial Literatures in English (4) Study of important writers from the British Commonwealth who are reshaping the English tradition. Writers studied include Achebe (Nigeria), Gordimer (South Africa), White (Australia), Atwood (Canada), Naipaul (West Indies), and Rushdie (India/Pakistan).
Not offered in 1999-2000.
76 Literature by Women (4)
Study of women's literature as a distinct tradition. Reading of major women writers from different periods and genres. Writers studied include Wollstonecraft, Sojourner Truth, Rossetti, Stein, Richardson, Woolf, Lessing, and Rich.

77 Reading Race, Class, and Gender in America (4)
Study of the influences that race, class, and gender have had on thematic and narrative models informing American literature and culture since the nineteenth century, with an emphasis on the historical development of these models since the colonial period. Readings include fiction and literary criticism.

78 Multi-Ethnic American Literature (4) Emphasis on a comparative approach to African American, Asian American, Native American, and Chicano literatures. Focus on, among other issues, how writers of color address histories of ambivalent citizenship and try to clear a space for minority identities in America.

80 Independent Study
83 Internship (4)
Consulting with the professor to develop objectives, students intern at local businesses, agencies, or media sites for a minimum of 15 hours per week. In addition, students meet weekly for a three-hour seminar where they focus on the problems and objectives of their experiences as they learn to shape communication skills to fit various audiences and purposes. Students must be juniors and seniors, and they must apply to take the course. The course may be taken only once. May not be taken pass/fail.

95 Special Topics in Language, Composition and/or Literature (4)

## Geography

GGY is the prefix for geography courses on schedules and transcripts.

30 Principles of Geography
Introduction to geography through the study of basic concepts (such as landforms, climate, regions,
land-human relationships) and the application of these concepts to selected regions of the world.

[^1]
# Health and Exercise Science 

Professors: Caterisano, Moss, Pierce (Chair), Powell, Yockey
Associate Professors: Patrick, Pearman
Assistant Professor: Feigenbaum
Lecturer: Murr
The General Education Requirement is Health and Exercise Science 10, "Wellness Concepts." Students with medical problems should malce them known so that the physical activities in the course can be adapted to the students' abilities.

## Majors

Students interested in majoring in Health and Exercise Science inust seek early advice from a member of the faculty and declare the major with the department chair. Majors may pursue either a B.A. or B.S. degree. Health and Exercise Science 10 is a prerequisite to all courses numbered 30 or above.

All students majoring in Health and Exercise Science inust talce Health and Exercise Science 30,41 and 47. B.A. degree candidates must also talce Health and Exercise Science 52. B.S. degree candidates must also take Health and Exercise Science 54. Biology 18 is a prerequisite to Health and Exercise Science 52 and 54. Math 11 and Physics 11 are also prerequisites for Health and Exercise Science 54. Certification in first aid and in CPR is required for graduation.

Majors choosing the non-teacher certification option must complete four courses numbered 30 or above in addition to the major core courses listed above. Majors choosing this option must also complete two non-credit slcills courses. Students who pass a swimming proficiency test may substitute any skills course for the otherwise required aquatics course.

Majors wishing to pursue a career in teaching must complete Computer Science 16 (or major department equivalent); Education 11/01, 20, 21 and 75; and Health and Exercise Science 33, 34, 35 and 36. The four Health and Exercise Science pedagogy courses (33, 34,35 and 36 ) are offered every other year. Health and Exercise Science 33 and 35 will be offered in the fall of 1999, and Health and Exercise Science 34 and 36 will be offered in the winter of 2000. They will not be offered in 2000-2001.

Students who pass a swimming proficiency test are not required to talce an aquatics course. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission into the Teacher Education Program and other pertinent information.

HES is the prefix for health and exercise science courses on schedules and transcripts.

01 Archery (0)
02 Badminton ( 0 )
03 Basketball (0)
04 Unarmed Self-Defense (0)
06 Fencing (0)
07 Modern Dance (0)
08 Golf (0)
09 Team Handball (0)
11 Outdoor Education (0)
12 Racquetball ( 0 )
13 Soccer (0)
14 Softball (0)
15 Distance Running (0)
16 Tennis (0)
18 Volleyball (0)
20 Swimming and Water Safety (0)
21 First Aid (0)
American Red Cross "Responding to Emergencies" includes Cardio-Pulmonary Resuscitation Emergencies. Legal liability is covered. ARC certification is available. Recommended for all teacher certification candidates.

22 Basic Lifeguarding (0)
Prerequisite: Health and Exercise Science 21 or current certificate in American Red Cross Standard First Aid and CPR.

## 23 Muscular Conditioning (0)

25 Water Safety Instructor (0)
Prerequisite: American Red Cross Lifeguard Training or Emergency Water Safety certificate. American Red Cross instructional methods and materials leading to instructor certification in water safety and swimming courses.
27 Ballet (0)

29 Techniques in Aerobic Dance Development and Instruction (0)
Prerequisite: HES 10.

## 10 Wellness Concepts (4)

Survey of wellness concepts which promote lifetime fitness and healthy lifestyle habits. Topics include aerobic and muscular conditioning, nutrition, and medical aspects of fitness. Participation in activities to develop cardiorespiratory endurance, muscular strength and endurance, and flexibility. (Lab fee required.)

## 30 Research \& Evaluation in Health \& Exercise Science (4)

A study of the various types of research relevant to health and exercise science. Attention is given to the application of computer technology in health and exercise science, research methods and measurement, and statistical techniques in the analysis and interpretation of human performance data. It is recommended that this course be taken early in the major.

## 32 Elementary School Physical Education

 Activities (2)Skills and activities appropriate for elementary school physical education and recreation. This course is for elementary education majors. Health and exercise science majors are not permitted to enroll in this course.

33 Teaching Methods for Elementary Physical Educators (4)
Corequisite: Health and Exercise Science 35. Methods and materials; skills and activities appropriate for elementary age children. Designed for Health and Exercise Science majors who are certifying to teach.

34 Teaching Methods for Secondary Physical Educators (4)
Prerequisite: Health and Exercise Science 33. Corequisite: Health and Exercise Science 36. Methods and materials relevant to instruction in middle and secondary school physical education.

## 35 Teaching Sport Skills I (4)

Corequisite: Health and Exercise Science 33. Methods and materials for planning, teaching and assessing psychomotor, cognitive and affective aspects of the following activities as outlined in the South Carolina Physical Education Curriculum Guidelines: soccer, softball and tennis.

36 Teaching Sport Skills II (4)
Corequisite: Health and Exercise Science 34. Methods and materials for planning, teaching and assessing psychomotor, cognitive and affective aspects of the following activities as outlined in the South Carolina Physical Education Curriculum Guidelines: basketball, handball and volleyball.

37 Health Promotion and Intervention (4)
Theory, planning, implementation and evaluation of health promotion and education programs. Overview of health care systems, public health issues and primary locations for health promotion.

38 School and Community Health
Study of school health services, school environment, school health instruction, curriculum and methods in health education, community health problems and community health services. Meets teacher certification in some states.

39 Elementary School Health (2)
The components of the elementary school health program including health education, health services and healthful school living. Meets certification of standards for elementary education majors. (Credit will be increased from two to four hours in September, 2000.)

40 Clinical Exercise Science (4)
Advanced exercise prescription guidelines for healthy populations (i.e., adolescents, women, elderly) and comprehensive rehabilitation program design and exercise prescription guidelines for selected chronic disease populations (i.e., cancer, COPD, diabetes, osteoporosis). Methods and materials for teaching topics related to health and exercise science.

## 41 Physiology of Exercise (4)

Recommended: Health and Exercise Science 30. Concepts and laboratory experiments concerning the mechanisms by which the human body functions, with special reference to the effects of acute and chronic exercise. Not open to freshmen. (Lab fee required.)

43 Medical Aspects of Athletics
(4)

Prerequisite: Biology 18.
The prevention and management of athletic injuries. (Lab fee required.)

## 44 Nutritional Aspects of Human

## Performance (4)

In-depth continuation of the study of nutrition as presented in Health and Exercise Science 10. Study of the structure, function and selection of food to resist disease, improve health and support maximum human performance.

## 45 Sport Psychology (4)

Examination of the psychological factors which influence and govern human performance, particularly athletic performance. Topics include performance enhancement (management of competitive anxiety, mental practice, imagery), social factors (team dynamics, personality, leadership) and health factors (exercise adherence, addiction, rehabilitation).

## 47 Motor Development (4)

Principles of growth and development as related to neuromuscular integration and motor learning. Topics include slcill acquisition, slcill refinement and adaptation of techniques for special populations. Laboratory experiences in motor development included as well as work with atypical clients in the exercise science setting.

## 52 Kinesiology (4)

Prerequisites: Biology 18 and Math 11 or 16 . Kinesiology is the study of living systems in motion. Course applies kinematics and kinetics to human anatomy and the study of human performance. Both the didactic and laboratory sections have practical applications of health and exercise science concepts to daily living activity as well as competitive events. A host of general parameters defining human motion are introduced, and students are able to make specific application of health and exercise science parameters in the context of the performer and environment. Course may not be taken if student has completed Health and Exercise Science 54/Physics 54 sequence. (Lab fee of $\$ 40$ required.)

## 54 Biomechanics (4)

Prerequisites: Biology 18, Math 11, Physics 11. Same as Physics 54. Integrates the principles of biology and mechanics as they relate to human motion and includes analysis of energy transduction in human motion as it relates to posture, mechanical work and gravity. Course is split equally between lecture and laboratory applications. Students complete and present a motion analysis study related to human performance, energy transduction and their interdependence. (Lab fee required.)

59 Principles of Administration (4) Conventional management practices and operational guidelines for fitness and sport industries. Topics include organizational leadership, planning, human resources, facilities, marketing and public relations, risk management and legal issues, and program evaluation.

## 65 Sport in Modern Society (4)

The study of sport as one of the most pervasive social institutions in our society. An investigation of the social aspects of sport and the relationship between sport activities and the social system in which they are embedded.

67 Analysis of Cardiovascular Function (4) Principles of exercise electrocardiography and evaluation of apparently healthy and high rislc
individuals. Includes EKG interpretation, cardiovascular dynamics, effects of exercise, drugs, and metabolic abnormalities, test orotocols, and other related topics.

68 Practicum in Graded Exercise Testing (2) Prerequisite: Health and Exercise Science 67. Practicum experience in laboratory for assessing cardiac and respiratory function, exercise capacity, body structure and composition via techniques of electrocardiography, impedance cardiography, spirometry, graded exercise testing, anthropometry, densitometry, etc. (Lab fee required.)

80 Independent Study (2,3,4)
Prerequisite: A written outline of proposed study for staff approval in the prior term.
The format for the outline should be obtained from the advisor. Provision for nonexperimental investigations.

83 Individualized Internships (1-4)
Individualized internships are typically developed by students and approved by a faculty sponsor. Working with an on-site supervisor, students develop objectives for the internship experience, write a report of their activities, read professional literature related to their internship experiences, and offer a written and oral summary of their activities at the conclusion of the internship. Class MUST be taken pass/fail and therefore will not count toward the health and exercise science major requirements.

85 Independent Research (2, 3, 4)
Prerequisite: Same as for Health and Exercise Science 80.
Provision for experimental research.
86 Department Internship (1-4)
Prerequisite: Student must have declared a major in health and exercise science and must have taken the appropriate courses for the type of internship requested.
Individualized internships are typically developed by faculty members at approved sites. Students develop objectives with faculty and the on-site supervisor, write a report of their activities, read professional literature related to their internship experiences, attend a weekly seminar to discuss their activities and offer a written and oral summary of their activities at the conclusion of the internship. This class may he taken only once and may NOT be taken pass/fail.

95 Special Topics in Health and Exercise Science (2, 3, 4)


## History

Professors: Block, Huff, Lavery, Leavell, Shi, Spear, Strobe 1 (Chair)
Associate Professors: Benson, Vecchio
Assistant Professors: Barrington, Ching, Faitler, Fehler, Granieri, O'Neill

History 11 (or Humanities 11, 12 and 13) must be taken to satisfy the General Education requirement and as prerequisite for any other course in the department. A student talcing a second course in history to satisfy the General Education requirements may talce any fourhour course numbered 21 or above.

## Majors

A major program in history must include at least eight courses numbered 21 and above. The normal program includes History 21 and one additional course in United States history, two courses in European history, one course in Asian-African history and a seminar.
Majors wishing to pursue a career in teaching history must complete Computer Science 16 and Education 11/01, 20, 21, 50/02, 53, 167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation.
Students wishing to certify to teach social studies will add to the courses necessary to certify in history History 45 and one from each of the following: (1) Political Science 20, 21, 55; (2) Sociology 21 or 35 or Anthropology 22; (3) Economics 11; and (4) Geography 30. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission into the Teacher Education Program and other pertinent information.
HST is the prefix for history courses on schedules and transcripts.

11 Ideas and Institutions in Modern Western Civilization (4)
Modern Western civilization, the forces that malce it, the processes by which it unfolds, and the broad patterns of development that can be identified and understood as they evolve.

21 Issues in United States History
Survey of United States history, with particular attention to the study of major individuals, move-
ments, institutions, and ideas. Also, beginning instruction on historiography, the appraisal of monographs and biographies, and the use of primary sources. Designed as an introduction to the major.

## 22 History of Women in America (4)

The history of women in America from the colonial period to the present. The focus is not on chronology, but on acquainting students with topics which disclose significant events, issues and problems in the changing experience of American women.

## 23 Colonial and Revolutionary Latin America (4)

Survey of the Spanish and Portuguese empires in the western hemisphere, from the first explorations and settlements until the achievement of independence in the 1820s. The course includes coverage of political and religious institutions and social issues such as race relations, witchcraft and piracy.

## 24 United States Social and Intellectual History (4)

Social conditions of various regions, occupations and classes with emphasis on antebellum reform movements, the intellectual problems introduced by technology and the role of minorities in society.

## 25 Mexico and Latin America (4)

Survey course which identifies the significant features in the historical evolution of Latin America from colonial times to the contemporary era. Primary emphasis on the national period of the nineteenth and twentieth centuries.

26 Women in European History (4) Examination of the political, economic and social forces on women's lives in European society. Starting with the dawn of civilization, the course covers the Greco-Roman world, Medieval Europe, the Early Modem period, and ends with modern industrial society.

30 Ancient History
Survey of the ancient civilizations of Mesopotamia, Egypt, the Hebrews, Greece and Rome, as well as investigation of selected historiographical problems (such as the fall of Rome) and in-depth reading in a selected area.

31 Medieval Europe, 476-1350 (4)
Survey of Medieval civilization, from the fall of Rome to the Blaclc Death, reading in representative source materials, and intensive reading in a selected area.

32 Renaissance and Reformation, 1350-1648 (4)
Examination of the age of transition from the Black Death of the mid-fourteenth century to the Thirty

Years' War of the seventeenth century. Historiography, economics, art, literature, and theology of the period.

## 33 The Age of the Enlightenment,

 1648-1789 (4)Investigation of the problems of the Enlightenment era, chiefly focusing on Western Europe, intellectual and institutional factors and the development of a scientific world view.

## 34 Nineteenth Century Europe, 1799-1914 <br> (4)

Study of European civilization when it was the dynamic and dominant civilization of the world. The impact of industrialism, romanticism, nationalism, imperialism, liberalism and socialism examined as background for the present century.

## 35 Twentieth Century Europe (4)

Study of European civilization from 1914 to the present. Special emphasis on the origin and course of World War I, the search for diplomatic stability, the regimes of Mussolini, Stalin and Hitler, World War II, the Cold War and the turmoil of the 1980s.

## 36 Russian History (4)

Russian political, social, and intellectual history in the nineteenth and twentieth centuries. Special topics include: growth of bureaucratic empire, development of revolutionary movements, the Communist Party of the Soviet Union and its personalities and the Russian novel as a vehicle for dissent.

## 37 History of England (4)

Survey of the development of the major ideas and institutions that have shaped British civilization. Starting with Roman Britain and continuing through the Tudor-Stuart monarchies, the course primarily covers English history, with some attention also given to the "Celtic fringe."

38 History of the German People (4) Investigation of the history of Germany, including Austria, from 1648 to the present. Emphasis on Austro-Prussian dualism, the failures of liberalism, the unification of Germany, the legacy of Bismarck, its disastrous twentieth century wars and the drive to reunification.

## 39 History of Eastern Europe (4)

Study of modern East European history with heavy emphasis on the events of this century. Eastern Europe is here defined as those countries located between Russian-speaking and German-speaking Europe

## 40 The United States to 1820 (4)

Selected topics in the colonial, revolutionary and early national periods of the United States, including reading and discussion of historiographical problems and some attention to the development of the new social history.

41 The United States, 1820-1890 (4)
The development of nationalism after the War of 1812, new party alignment, Jacksonian democracy,

the Civil War with its causes and ramifications and the process of Reconstruction.

42 The United States, 1890-1941 (4) Examination, in some depth, of basic domestic problems and foreign policy in United States history of the period. Includes modernization, imperialism, entry and objectives in the World Wars, the complexities of the 1920s, the Great Depression and the New Deal.

## 43 The United States since 1941 (4)

Central focus on the evolving experience of the American people from 1941 to the present, and the conflicting social, racial, political, economic and international forces which have shaped that experience.

44 Readings in American Intellectual History since 1865 (4)
Examination of influences on American thinking since 1865: naturalism, Darwinism, pragmatism, relativism and existentialism. Usually organized around a topic such as the response to modernization or the impact of science.

45 South Carolina (4)
Study of the development of South Carolina as an American state and its unique contributions to the United States as well as the way in which it reflects development in the South and the nation as a whole.

46 United States Foreign Relations (4) Treatment of the diplomatic history of the United States from colonial times to the present, with emphasis on the years since the American revolution. The approach is essentially chronological.

47 The African American Experience
Emphasis on the African origins of black Americans, the slave experience, the impact of the Civil War and Reconstruction and the civil rights movement.

## 48 The South (4)

Investigation of the development of the South as a region and section, with particular emphasis on economic and social history and the question of the uniqueness of the South. Special study devoted to race relations.

## A50 South Asia <br> (4)

Selective emphasis on the cultural and historical values undergirding South Asian civilization, the cultural interaction of Indians with progressive Western intrusion and British dominance. the rise of nationalism and the development of contemporary India, Pakistan, Bangladesh, Nepal and Sri Lanka.

A51 Cultural History of China (4)
Survey of the major periods of Chinese pre-modern history, with emphasis upon the interrelationship of political institutions, social and economic structures, religion, philosophy, literature and fine arts.

## A52 History of Modern China (4)

China in the modem world: investigation of socioeconomic, political and cultural developments in China from the time of the Opium Wars in the mid-nineteenth century to the present.

## A54 History of Africa (4)

Survey of Africa from earliest times to the present. Themes include the peopling of the continent; evolution of its politics, cultures and trading systems; the African diaspora; European colonialism; and post-colonialism.

A55 Cultural History of Japan (4)
Survey of the distinctive cultural ethos of each major period in Japanese premodern history considering artistic, literary, religious and institutional developments. Special attention to comparative study both among the Japanese eras and between the Japanese and the West.

A56 History of Modern Japan (4)
Emphasis on Japan's political, social and economic development since the mid-nineteenth century. Particular attention to basic Japanese values which enhance the drive for modernization in this society.

A57 History of the Modern Middle East Examination of the major political and social developments in the Middle East in the nineteenth and twentieth centuries. Attention divided among the Arab, Persian and Turkish peoples and states.

A58 History of Japanese Religion and Its Practice (4)
Study of the historical interaction of indigenous Shinto ideas with various types of Buddhism, as well as their confrontation with Christianity. Emphasis on the dynamics of the religious concepts and practices that have served the spiritual needs of the people of Japan from mythology to the present. Course concludes with attention to conflicts between religious theory and actual practice as expressed in contemporary folk religion.

60 French Revolution and Napoleon, 1789 1815 (4)
Investigation of ideas, forces and actors in this epic revolutionary period and analysis of results and contributions of Napoleonic dominance in Europe.

75 Senior Seminar in History (4)
Reading and discussion course for majors covering a specific topic of history. Emphasis on historiography; consideration of numerous interpretations.

80 Independent Study in History (4) Majors may elect an independent study project under the direction of their advisor. Projects vary with interests and background of the individual student.

95 Special Topics in History

## Interdisciplinary Studies

Interdisciplinary Studies 30 may be taken to satisfy the General Education requirement in fine arts. Interdisciplinary Studies 50 or 51 satisfies the General Education requirement for an additional humanities course.

IDS is the prefix for most interdisciplinary studies courses on schedules and transcripts.

## 20 The Brain (4)

30 Ideas in the Arts (4)
Investigation of certain ideas and how they manifest themselves in the three arts: drama, visual arts and music.

40 Human Sexuality (4)
50 England (8)
51 Twentieth Century England
75 Issues of Latin America (4)
Humanities 11, 12 and 13 may be taken to satisfy the General Education requirement in religion, history, and literature.

Through the methods of historical, literary, philosophical and religious appreciation, these courses examine dominant ideas in Western culture and their influence on social, political, economic, scientific, religious and psychological events and movements. Such themes as the following are emphasized: the rise and fall of political entities, the faiths by which men live and die, and the development of philosophical, social and aesthetic sensibilities.

HUM is the prefix for humanities courses on schedules and transcripts.

## 11 The Roots of Western Civilization

12 The Search for New Authorities (4)
13 Revolution, Progress and Anxiety
The humanities sequence below provides four hours credit for each course or eight hours for the sequence. Completion of both courses satisfies the General Education Requirement of an upper-level humanities course numbered 20 or above.

19-20 Issues in the Humanities
(4 each; 8 for both)
Examination of contemporary issues in the humanities. In 1999-2000, the focal issues are the cultural transformations effected by new and old technologies, including how the information revolution affects our way of reading and creating texts; how various forms of the "book" shape the cultures of those who use them; the diversity of meaning in an age of interpretation; and the search for "self" in a postmodern age.

The two science courses below may be taken to satisfy the General Education requirement in the natural sciences for non-science majors. No GER credit is awarded unless both courses are completed.

SCI is the prefix for these courses on schedules and transcripts.

16 The Structure of the Universe (4) The interdisciplinary examination of the structure of the universe from atoms to stars. Lab sessions explore the methods of each discipline.

## 17 The Changing Universe (4)

The interdisciplinary examination of the dynamic nature of the universe from atoms to stars. Lab sessions explore how each discipline studies dynamic systems.

## Mathematics

Professors:Cook, Fray, Hammett, Poole, Rall (Chair),Shell, Sherard, Sloughter Associate Professors: Lewis, Marlcus, Woodard Assistant Professors: Jue, Smith, Whitalter

Mathematics 11 meets the General Education requirement for either the B.A. or B.S. degree. Mathematics 15,16 or 17 meets the General Education requirement for the B.A. but not for the B.S. degree. Mathematics 31 will satisfy the General Education requirement for the B.A. degree for those students who subsequently complete Mathematics 32 and 33.

Anv student who wants to talce calculus but whose score on the placement test indicates an inadequate understanding of precalculus mathematics should complete the two-course calculus sequence Mathematics 10-11S, which covers the material of Mathematics 11 while supplementing it with a review of precalculus mathematics. The student must complete both of these courses to satisfy the General Education requirement in mathematics. Successful comvletion of the two-course sequence will be counted as the equivalent of successful completion of Mathematics 11 in regard to degree, prerequisite and graduation requirements.

Mathematics 10 may not be taken pass/fail and does not satisfy the General Education requirement for either the B.A. or the B.S. degree. A student may not receive credit for more than one of Mathematics 11, Mathematics 11S or Mathematics 17.

## Majors

The Department of Matheinatics offers a major in mathematics and two interdisciplinary majors, computer science-mathematics (jointly with the Department of Computer Science), and mathematics-economics (jointly with the Department of Economics and Business Administration). To graduate with any of these majors, a student must have within each department of the major at least a 2.0 gradepoint average over all courses used to satisfy the major requirements.

A inathematics major will normally consist of eleven full courses in mathematics in addition to the course used to satisfy the General Education requirement, and must include Mathematics 12, 21, 28 and 34.

Mathematics $10,15,16,17,30,31,32$ and 33 may not be used to satisfy the requirements for a major. Students planning to major in mathematics are urged to complete through Mathematics 21 during the freshman year.

For students planning to do graduate worle in mathematics, the department strongly recoinmends that in addition to the four required courses the major should include Mathematics 22, 41, 42, 43 and 44.
Students planning to teach mathematics in secondary schools must complete a major in mathematics in order to be certified. In addition to the four required courses, the inajor must include Mathematics 22, 36, 37, 41, 43 and 47 . Students preparing to teach secondary school mathematics must also talce Computer Science 11 and Education 11/01, 20, 21, 50/02, 167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information.

For students planning mathematics-related careers in edovemment service. business or industry, the department strongly recommends that in addition to the four required courses the major should include Mathematics 22, 37, $39,40,47$ and at least two courses from Mathematics $41,42,43$. The department also recommends at least one course from Computer Science 25, 44 and 49.

Computer Science-Mathematics majors must take Mathematics 11,12, 21, 22, 34 and one of Mathematics 28,37 or 40 plus Computer Science 11, 12, 22, 30,44 and 49. Mathematics 28 may be substituted for Computer Science 22.

Mathematics-Economics majors must talce Econoinics 11 (or Economics 21 and 22); Economics 31, 45, 46; two electives in economics numbered 30 or above; Mathematics 11 or $11 \mathrm{~S}, 12,21,34,37,47$; and one elective from Mathematics 22, 28, 40, and 41. Majors are advised to talce Computer Science 11 and 49 .

MTH is the prefix for mathematics courses on schedules and transcripts.

10 Integrated Precalculus/Calculus I (4) Introduction to the theory and methods of differential calculus. Topics include functions, graphs, limits, continuity and derivatives.
Enrollment by placement only. May not be taken pass/fail.

## $11 S$ Integrated Precalculus/Calculus II

Prerequisite: Mathematics 10.
Introduction to applications of the derivative and the theory and applications of the definite integral.
Topics include trigonometric functions and their derivatives, applications of derivatives, antiderivatives, the definite integral and applications of the integral.

11 Analytic Geometry and Calculus I (4) Prerequisite: A sufficiently high score on the placement test.
The first course in the standard calculus sequence. Introduction to the theory, methods, and applications of differential calculus and an introduction to the definite integral. Topics include algebraic and trigonometric functions, limits and continuity, rules for differentiation, applications of the derivative, antiderivatives, and the definition and basic properties of the definite integral.

12 Analytic Geometry and Calculus II
Prerequisite: Mathematics 11.
The second course in the standard calculus sequence. Included are an introduction to the logarithmic and exponential functions, the applications of the definite integral, techniques of integration, indeterminate forms, improper integrals, numerical methods, and infinite series.

## 15 Ideas in Mathematics (4)

Examination of the ideas, concepts and paradigms which have significantly influenced the growth of modern mathematical thought, with emphasis on an appreciation for the creative side of mathematics and the fundamental role it has played in the development of modern civilization. Topics are drawn from across the spectrum of mathematical thought and treated from a historical and cultural as well as mathematical perspective.

## 16 Finite Mathematics (4)

Mathematical topics selected from the following: logic, set theory, combinatorics, probability, statistics, matrix algebra, linear programming, Marlcov chains, graph theory, and mathematics of finance. A student cannot receive credit for this course after credit has been received for Mathematics 28 or any Mathematics course numbered above 33.

## 17 Introduction to Calculus (4)

Prerequisite: A sufficiently high score on the placement test.
Introduction to the methods of differential and
integral calculus with applications drawn from the social and life sciences and business. The basic ideas and methods of differentiation and integration of functions of one variable are covered, as well as differentiation of functions of several variables.

21 Analytic Geometry and Calculus III
(4)

Prerequisite: Mathematics 12.
The third course in the standard calculus sequence. Topics include geometry and vectors in two- and three-dimensional spaces, polar coordinates and conic sections, vector calculus, and differentiation and integration of functions of several variables.

## 22 Differential Equations (4)

Prerequisite: Mathematics 21.
Introduction to the theory, methods, and applications of ordinary differential equations, including first- and higher-order differential equations, series solutions, systems, approximate methods, Laplace transforms, and phase plane analysis.

## 26 Number Theory

Prerequisite: Mathematics 12.
Introduction to the classical arithmetic properties of the integers. Divisibility properties, primes and their distribution. Congruences, diophantine equations and their applications. Number-theoretic functions, Mobius inversion and quadratic reciprocity. Continued fractions, Fibonacci numbers, Pythagorean triples and perfect numbers.

28 Introduction to Discrete Mathematics
Prerequisite: Mathematics 21 or consent of instructor.
Introduction to the main ideas and proof techniques of discrete mathematics. Among the topics covered are mathematical logic, relations, functions, partitions, recursion, induction, combinatorial principles, inclusion/exclusion, enumeration, and introductory graph theory (trees, connectivity, planarity, colorings, etc.).

30 Introduction to Statistics (4)
Prerequisite: Mathematics 11,16 or 17 , or consent of instructor.
Non-theoretical, precalculus course in elementary probability and statistics. Counting problems, probability, various distributions, random variables, estimation, hypothesis testing, regression and correlation, analysis of variance, and nonparametric methods. A student cannot receive credit for this course and Mathematics 47 or Economics 25.

31 Mathematics for Elementary School Teachers I (3)
Problem solving and deductive reasoning; sets and set properties; relations and functions; numeration systems; the systems of whole numbers and integers; computational algorithms; elementary number theory; and methodology appropriate for teaching these topics in grades $\mathrm{K}-8$.

## 32 Mathematics for Elementary School Teachers II (3)

Prerequisite: Mathematics 31.
Fractions, decimals, and percents; ratio and proportion; applications of percent; the systems of rational numbers and real numbers; simple probability; descriptive statistics; and methodology appropriate for teaching these topics in grades K-8.

## 33 Mathematics for Elementary School

Teachers III (3)
Prerequisite: Mathematics 32.
Introductory geometry, constructions, congruence, similarity, measurement (including the metric system), an introduction to Logo turtle graphics, and methodology appropriate for teaching these topics in grades K-8.

34 Linear Algebra and Matrix Theory Prerequisite: Mathematics 21.
Study of matrix algebra, systems of linear equations, finite dimensional real vector spaces, linear transformations, determinants, inner product spaces, eigenvalues and eigenvectors.

## 36 Modern Geometry (4)

Prerequisite: Mathematics 28 or consent of the instructor.
Development of Euclidean and non-Euclidean geometries. Topics include axiom systems, models, congruence theorems, parallel postulates, and the philosophical and historical background to geometry.

## 37 Probability (4)

Prerequisite: Mathematics 21.
Calculus-based course in probability, covering counting, discrete and continuous probability, random variables, important probability distributions, joint distributions, expectation, moment generating functions, and applications of probability.

## 39 Applied Mathematics (4)

Prerequisite: Mathematics 22,34 or consent of the instructor.
Mathematics applicable in the physical sciences and engineering. Topics may be selected from the following areas: vector calculus, boundary value problems, special functions, Fourier analysis, and the calculus of variations.

40 Mathematical Models and Applications
Prerequisites: Mathematics 22, 34.
A selection of mathematical models using various continuous and discrete methods and having applications in business and the social and biological sciences. Included are ecological models, epidemic models, Richardson's arms race model,
and population growth models. Other topics discussed are linear programming, voting problems, and Marlcov chains.

## 41 Real Analysis (4)

Prerequisite: Mathematics 28.
A theoretical introduction to some of the basic ideas of real analysis: real numbers and the topology of the real line, sequences and series of real numbers, limits of functions, continuity, uniform continuity, differentiation, the Riemann integral, and sequences and series of functions.

## 42 Topics in Analysis (4)

Prerequisite: Mathematics 41 or consent of the instructor.
An in-depth investigation of selected topics in analysis.

## 43 Modern Algebra (4)

Prerequisites: Mathematics 28, 34.
A theoretical introduction to some of the basic ideas of modern abstract algebra. Included is a study of groups, rings, domains, polynomial rings and fields as well as an investigation of their substructures and of the fundamental homomorphism theorems.

## 44 Topics in Algebra (4)

Prerequisite: Mathematics 43 or consent of the instructor.
An in-depth investigation of selected topics in abstract algebra.

## 46 Topology

Prerequisites: Mathematics 21, 28.
Introduction to concepts in topology including the following: topological spaces, metric spaces, continuity, homeomorphisms, neighborhoods, closed sets and closure, basis and sub-basis for a topology, subspaces, product spaces, connectivity, compactness, and separation axioms.

## 47 Mathematical Statistics (4)

Prerequisite: Mathematics 37.
Calculus-based course in statistics covering sampling, estimation, hypothesis testing, chi-square tests, regression, correlation, analysis of variance, experimental design, and nonparametric statistics.

80 Directed Independent Study $(2,3,4)$
Study of an area of mathematics of interest to the student that is not part of one of the listed courses. The student must choose a faculty member to direct the study and, together with this faculty member, prepare a description of the material to be covered and submit it to the department chair for approval.

## Military Science

## Professor: Niclterson (Chair)

Assistant Professors: Busteed, Livingston, Smoot
Instructors: Moore, Harris
The Reserve Officers' Training Corps (ROTC) course prepares young men and women to become leaders as cominissioned officers in the U. S. Army, Army Reserve, and National Guard. Students desiring a cominission must:

1. Complete the basic course consisting of Military Science 10, 11, 14, 19, 20, 22 and 29 by the end of the sophomore year, or receive placement credit for Basic Camp, JROTC or prior service.
2. Complete the advanced course consisting of Military Science 31, 32 and 39 during the junior year and Military Science 41, 42 and 49 during the senior year.
3. Attend a six-week summer training camp at Fort Lewis, Wash., between the junior and senior years.
4. Receive satisfactory credit for the following courses:
a. English 11
b. Math 11, Math 16, or Math 17
c. Computer Science 11 or 16 , or demonstrate competency
d. History 11 or Humanities 11

Any student may talte the basic course classes without incurring a military obligation.


MS is the prefix for military science courses on schedules and transcripts.

10 First Year Basic Leadership Lab (0) Principles of leadership, military customs and courtesies, military uniform regulations, orientation to the U.S. Army, inspections, and military correspondence. Emphasis on individual fitness. One weelcend exercise. Fall term.

## 11 World Military History (First Year Basic

 ROTC) (4)The evolution and impact of armed conflict on society from the earliest pitched battles to the onset of nuclear warfare at the end of World War II. Emphasis on the great captains of armies, their accomplishments and tactics. Development of weapon systems also included. (Lab fee required.)

## 14 Basic Rifle Marksmanship (0)

Fundamentals of rifle marksmanship, to include weapon familiarity, safety, sighting, and firing from various positions. One field trip required.
Winter term.
19 First Year Basic Leadership Lab, Part II
Prerequisite: Military Science 10.
Practical exercises in small unit leadership, introduction to current weaponry, map reading, rappelling, basic individual tactical training and survival techniques.
One weekend exercise. Spring term.
20 Second Year Basic Leadership Lab
Prerequisites: Military Science 10 and 19.
Advanced leadership training focusing on military briefings, tactical radio communications and operating procedures, terrain analysis, with practical exercises in basic military tactics as well as oral and written communication.
One weelcend exercise. Fall term.
21 National Security and the Concept of Force (Second Year Basic ROTC) (4)
Prerequisite: Military Science 11 or permission of instructor.
The role of the U.S. Military as an instrument of foreign policy from 1945 to the present with emphasis on armed conflict and other issues dealing with the U.S. role as world leader in the post-war era. (Lab fee required.)
Winter term.
22 Basic Orienteering and Land
Navigation (0)
Basic principles in reading military maps to include identifying terrain features, locating points, and determining distances. Students learn how to orient themselves on the ground with military maps. Winter term.

29 Second Year Basic Leadership Lab, Part II (0)
Prerequisites: Military Science 10, 19, 20.
Further leadership training that focuses on initial first aid treatment of combat injuries on the battlefield, triage, and transportation of the injured from the line of battle.

31 First Year Advanced ROTC (4) Prerequisites: Military Science 10, 11, 12, 14, 19, 20, and 29 or prior military service or successful completion of ROTC Basic Camp at Fort Knox, Ky. Small unit offensive and defensive operations. Organization of U.S. military forces, branches of the Army, and command and staff functions. Oral briefings required. Preparation for ROTC Advanced Camp at Fort Lewis, Wash. Monday and Thursday afternoon labs plus two weelcend exercises.
Spring term.
32 Military Map and Compass (0)
Characteristics of military maps, use of marginal information, determination of locations, measurement of distance and direction. Cross-country navigation using map, terrain association, and compass. Leadership seminar included. Monday and Thursday afternoon lab plus one weekend exercise.
Winter term.
39 First Year Advanced Officer Leadership Seminar (0)
Management of military resources. Practical experience in leading small units in drill and ceremonies and tactics. Off-campus training exercises in weapons marksmanship, land navigation, and tactics.
Monday afternoon lab plus one weekend exercise. Fall term.

41 Second Year Advanced ROTC (4)
Prerequisite: Military Science 31.
Practical experience in conducting and evaluating training. Command and staff functions. Personnel administration, professionalism and ethics, military writing and briefings. Monday afternoon lab plus one weekend exercise.
Fall term.
42 Leadership Seminar (0)
Military law. Moral values, legal and professional responsibilities of a commissioned officer.
Winter term.
49 Second Year Advanced Officer Leadership Seminar (0)
Exercise command and staff functions. Write after action reports. Conduct of meetings and briefings. Plan and execute training plans. Prepare for commissioning in the U.S. Army. Two two-hour labs weekly. Two weekend exercises.
Spring term.

## Modern Languages and Literatures

Professors: Bost (Chair), Cherry, Chew, Cox, Maiden, Parsell, Patton, Pecoy, Prince, Whisnant
Associate Professors: Allen, Bartlett, Morgan, Xu, Yagi
Assistant Professors: Buckley, Friis, Kearns
Instructors: Boyer, Manyé
The following courses meet the General Education requirement in literature: French 31, 32; German 31, 32; Spanish 31, 32, 37; Modern Languages and Literatures A34, A37, A38. To complete the General Education requirement in foreign languages, freshmen and transfer students must take one to three courses in a given language ( $21 ; 12 \mathrm{Y}$ and 21 ; or 11,12 and 21) OR one course beyond the 21 level, as determined by placement tests. A foreign language course may not be taken pass/ fail until a student has satisfied the General Education requirement.

Foreign languages not taught at Furman inay be taken at another accredited institution to fulfill the General Education requirement with permission of the chair. Students must take at

Furman the course that completes and satisfies the language requirement.

All students who have studied a particular foreign language in high school should take the appropriate placement test during freshman Orientation even if they do not anticipate continuing the study of that language. Students who plan to continue a language previously studied must take the appropriate olacement test to determine at what level they will continue the language at Furman. They receive credit beginning with the course into which they are officially placed. Students inay start a new language, if they choose.

Entering students who do not demonstrate on the placement test the ability to continue the same language on the 20 -level may take the appropriate 10 -level courses and complete work through course 21. A placement recominendation of 12 Y indicates a special course providing intensive review and enrichment for those who demonstrate some proficiency but who do not place into 21.12 Y courses are not interchangeable with normal 12 courses.

Students who have had three years or more of a language may not take the 11 -level of that language for credit. If the placement

recommendation is 11 , students must either take 12 Y or start a new language.

Transfer students generally meet the foreign language requirement by presenting credits (at least 12 semester hours) which are equivalent to the $11,12,21$ sequence of courses at Furman. Those who have not completed the above eauivalents are advised bv the Associate Dean and University Registrar, in consultation with the department. Transfer students should also take the appropriate placement test if there is any possibility of additional study in that language at Furman.

The following prerequisites apply to all courses in the department:
anv 12 course- 11
any 12 Y course - placementonly any 21 course - $12,12 \mathrm{Y}$ or placement any $22,23,25,26$ or 27 course 21 or placement
French, German and Spanish courses numbered 30 or above (except foreign study) - two courses above 21 or placement.

Majors (French, German, Spanish)
At least eight courses in a specific language (French, German, or Spanish) beyond course 21 are generally prescribed, to include 25 , 26,31 and 32 . Spanish majors may substitute Spanish 27 for 26 , and Spanish 37 for 32. French majors may substitute French 27 for French 26. All maiors are encouraged to complete a study abroad-travel program before their senior year.

All maiors must take at least one course in their major language during both their junior and senior years. Four literature courses numbered 30 or above are required for a foreign language major.

## Study Abroad

The French, German and Spanish courses designated 49,50 and 54 are offered periodically by Furman in Versailles, Bonn, Madrid, Costa Rica, and Chile. There is also an ongoing program in Japan and a fall-term program in China.

## Language House Program

Lannuuane houses in Chinese, French, German, Japanese and Spanish are located in the North Village Residential Complex. In addition to the residential apartments, there is a common
area devoted to the programmatic and informal activities of the language houses. This suite is equipped for meals, seminars, satellite television and with computers for student use, and it has a direct link to the multimedia resources of the Language Center. Students can apply to live in the houses for their sophomore, junior or senior years. Students living in the houses are expected to make a one-year commitment to the program and to speak the target language in the house. To facilitate that effort, a native-speaking resident in each language lives in the house and helps to coordinate program activities. All students participating in the program must take MLL 28, which is a year-long course in conjunction with the language house.

## Teacher Education

Majors wishing to pursue a career in teaching must complete Computer Science 16 and Education 11/01, 20, 21, 50/02, 167 and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a postbaccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Those who wish to be certified in French. Spanish or German are required to take both Education 50 and Modern Foreign Languages 65. Modern Foreign Languages 74 is a further option for students wishing to teach English to non-native speakers. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information. The Curriculum Materials Center in Furman Hall 209 houses a collection of language teaching aids for staff members and teaching interns.

FR is the prefix for French courses; GER is the prefix for German courses; SPN is the prefix for Spanish courses; CHN is the prefix for Chinese courses; JPN is the prefix for Japanese courses; MLL is the prefix for courses in the Language Houses as well as courses in Modern Languages and Literatures and Asian and African cultures and literatures; LNG is the prefix for courses in linguistics; and MFL is the prefix for modem foreign languages (teaching methods). Courses with the prefixes CHN , MLL, JPN, LNG and MFL are not normally considered major courses in this department.

## Chinese

## 11 Elementary Chinese I (4)

Introduction to the sound system and grammatical structures necessary to develop listening and speaking slcills in Mandarin Chinese. Initial reading and writing exercises with basic Chinese characters. An appreciation of Chinese culture underlies the orientation of the course. Laboratory required.

12 Elementary Chinese II (4)
Continuation of development of skills begun in Chinese 11, with increased emphasis on vocabulary expansion, idiomatic expression, and cultural differences.Structured introduction to the basic sltills of reading and writing Chinese characters. Laboratory required.

21 Intermediate Chinese I (4)
Continuation of development of proficiency in listening and speaking, while expanding reading and writing slcills, using materials of a literary or cultural nature. Review of grammar included. Laboratory required.

80 Directed Independent Study
(4)

## French

11 Elementary French I (4)
Introduction to the sound system and grammatical structure necessary to develop listening, speaking, reading, and writing slcills in French. An appreciation of French-speaking culture underlies the orientation of the course. Laboratory required.

## 12 Elementary French II (4)

Continuation of the development of the slcills begun in French 11, with increased emphasis on vocabulary expansion, idiomatic expression, and cultural differences. Laboratory required.

12Y Intensive Elementary French (4) Designed to prepare students with some background in French (as determined by placement tests) for French 21. A one-semester equivalent of French 11 and 12. Enrollment by placement only. Laboratory required.

21 Intermediate French I (4) Continuation of the development of proficiency in listening and spealcing, while expanding the reading and writing skills, using materials of a literary or cultural nature. Grammar review included. Laboratory required.

22 Intermediate French II (4) Builds upon the proficiency developed through course 21. Reading of short worlcs of fiction and nonfiction with discussion and written assignments in French on cultural and literary topics.

## 25 Composition and Conversation (4)

For students who have credit for Intermediate French I or demonstrate proficiency beyond that required for enrollment at that level. Emphasis on idiomatic expression through guided oral and written practice. Review of basic phonology, grammar and syntax included.

26 French Civilization (4)
Survey of the culture and civilization of France and, to a lesser extent, other parts of the Frenchspeaking world. Areas of study include history, geography, politics, the arts, and daily life.

27 Contemporary French Culture (4) Overview of contemporary France through a thematic approach to such topics as geography, demography, lifestyles and cultural patterns. Examination of the influence of France and Francophone nations within the global community. Incorporates computer technology, including newsgroups, discussion lists and Internet resources.

31 Survey of French Literature I (4) Introduction to the authors and their representative worlcs from the beginnings of French literature to the eighteenth century.

## 32 Survey of French Literature II (4)

Introduction to the authors and their representative worlcs from the eighteenth century to the middle of the twentieth century.

36 The French Language (4)
Survey of modem descriptive linguistic principles, study of the historical development of French from its earliest stages to the present, and analysis of the phonology, morphology, syntax, and semantics of modem standard French.

37 Classical Drama (4)
Survey of seventeenth century French classical drama, including selected principal worlcs of Comeille, Racine, and Moliere.

40 Advanced French Oral and Written Expression (4)
Prerequisites: French 25 or 49 and one 30-level course, or permission of instructor.
This course is designed for advanced students to perfect their spolcen and written French. Emphasis is on sustained expository, persuasive and rhetorical communication; on advanced grammar usage and syntax; and on precision in the production of phonemes and intonational patterns.

A42 Black Novel in French (4)
Study of the major francophone authors of Africa and the Caribbean. Emphasis on the importance of tradition, society and culture in the prose fiction of black writers.

46 French Literature of the Enlightenment Introduction to the literature of the eighteenth century (1715-89), including essay, theater and prose fiction. Works by authors such as Voltaire, Diderot, Rousseau, Montesquieu, Beaumarchais and Laclos.

## 47 Twentieth Century Drama and Poetry

Survey of the major developments, both theoretical and practical, in French drama and poetry since 1913. Readings include plays by such representative dramatists as Giraudoux, Salacrou, Sartre, Ionesco and Beckett. Among poets considered are Valery, Apollinaire, St. John Perse, and the early Surrealists.

49 Foreign Study in French Language (4) For students who have credit in Intermediate French or demonstrate proficiency beyond that required for entry into Intermediate French. Emphasis on idiomatic expression in speech and writing. Offered in France.

50 Foreign Study in French Civilization (4) Cultural history of France, including history, politics, geography, the arts, architecture, and daily life. On-site visits (museums, monuments, cathedrals, etc.). Offered in France.

## 51 French Romanticism (4)

Study of selected worlcs of the principal literary figures of the first half of the nineteenth century in France. Poetry, prose fiction, and drama included.

52 French Naturalism (4)
Study of selected worlcs of the principal literary figures of the second half of the nineteenth century in France. Poetry, prose fiction, and drama included.

53 Twentieth Century French Novel (4) Study of the major worlcs and authors of twentieth century prose fiction in France.

54 Foreign Study in Twentieth Century French Drama (4)
Survey of twentieth century French drama, both as literature and spectacle, including selected worlcs of Montherlant, Claudel, Anouilh, Giraudoux, Sartre, and Camus. Offered in France.

## 75 Senior Seminar in French (4)

The opportunity to address a topic, period, author, or genre in depth. The student is provided a chance to synthesize the experience of previous course worlc in a research project.

## 80 Directed Independent Study

95 Special Topics in French (4)
The opportunity to address a topic not normally covered in the standard curriculum.

## German

## 11 Elementary German I (4)

Introduction to the sound system and grammatical structure necessary to develop listening, speaking, reading, and writing slcills in German. An appreciation of German-speaking culture underlies the orientation of the course. Laboratory required.

## 12 Elementary German II (4)

Continuation of the development of the skills begun in German 11, with increased emphasis on vocabulary expansion, idiomatic expression, and cultural differences. Laboratory required.

12 Y Intensive Elementary German (4) Designed for students who have already completed Elementary German on the secondary level, but do not place into German 21. A four-slcills intensive review of the fundamental features of modem German. An appreciation of German-speaking culture and civilization underlies the orientation of the course. Enrollment by placement only. Laboratory required.

## 21 Intermediate German I (4)

Continuation of the development of proficiency in listening and speaking, while expanding the reading and writing slcills using materials of a literary or cultural nature. Grammar review included. Laboratory required.

22 Intermediate German II (4)
Builds upon and further enhances the basics developed through course 21. By reading numerous short works of fiction and nonfiction and through discussions and short written assignments in German, students expand the critical listening, speaking, reading, writing, vocabulary and cultural slcills necessary for further study

23 Specialized Readings in German (4) Introduction to the technical language of various fields in the natural sciences, social sciences, or the humanities. Offerings have included biology, business, chemistry, philosophy, and psychology.

25 Composition and Conversation (4) For students who have credit in Intermediate German I or who demonstrate proficiency beyond that required for enrollment at that level. Emphasis on idiomatic expression through guided oral and written practice. Review of basic phonology, grammar and syntax included.

26 German Civilization (4)
Advanced intermediate-level introduction to the culture and civilization of the major Germanspeaking areas of Europe, i.e., the Federal Republic of Germany, the German Democratic Republic, Austria, and Switzerland. The goal is an understanding and appreciation of the contemporary civilization and its historical development.

31 German Literature until 1750 (4) Survey of the development of Germanic literature from its earliest examples up to the Enlightenment. Primary emphasis on German literature with the reading of numerous representative texts.

## 32 German Literature from 1750 to the

 Present (4)Survey that provides an initial exposure to the development of German literature from the Enlightenment to the present. Students read representative texts by major authors of the various literary periods and movements.

## 34 German Poetry (4)

Poetry by authors from all periods and movements of German literature. The goal is a basic understanding of the development of German poetry and a sensitivity to and appreciation of the poem as an artistic expression.

36 The German Language (4)
Comprehensive study of the historical development of German in a cultural and linguistic context from its earliest stages to the present and analysis of the phonology, morphology, syntax, and semantics of modern standard German.

## 40 Advanced German Oral and Written

 Expression (4)Prerequisites: German 25 and one 30 -level course, or permission of instructor.
This course is designed for advanced students to perfect their spoken and written German. Emphasis is on expository, persuasive and rhetorical communication; on advanced grammar usage and syntax; and on precision in the production of phonemes and intonational patterns.

41 The German Novelle (4)
Focus on the evolution of the novelle as a literary form in the nineteenth and twentieth centuries. Students read selected authors whose worlts represent the best examples of this genre.

## 42 The Age of Goethe (4)

Introduction to the literature and culture of the classical period in German literary history from 1750 to 1832 . Students learn to appreciate the development of the great classical writers during this in-depth study of the major worlts produced in this period.

49 Foreign Study in German Language (4) Part of the foreign study curriculum in Freiburg. Students study German on their level of proficiency with native instructors.

50 Foreign Study in German Culture (4)
Part of the foreign study curriculum in Freiburg. Students learn to understand and appreciate various forms of art and architecture. Special emphasis on the art and architecture of the Germanspealting world.

51 German Romanticism (4)
Detailed study of the principal literary figures and works of literature during the early nineteenth century in Germany. Focus on the origins of various characteristics of Romanticism and the ramifications of this movement in other fields and in later periods of German literature.

54 Foreign Study in German Literature (4) Part of the foreign study curriculum in Freiburg. The genre chosen is usually drama. Students read and discuss various dramas as works of literature. Major emphasis on the production and staging of these dramas. The class attends performances of the dramas read.

55 German Theater (4)
Introduction to the major dramatists of the nineteenth and twentieth centuries and to drama as a literary form and a sociological, philosophical, and cultural reflection of the times. In addition to reading representative texts, the evolution of dramatic theory and techniques is discussed.

## 56 Readings in German Literature (4)

 In-depth focus on a period, movement, author, or genre. Offerings in the past have been post-1945 German literature and the literature and culture of the Weimar Republic. May be repeated once with change of topic.
## 75 Senior Seminar in German (4)

The opportunity to address a topic, period, author, or genre in depth. The student is provided a chance to synthesize the experience of previous course work in a research project.

80 Directed Independent Study
95 Special Topics in German (4)
The opportunity to address a topic not normally covered in the standard curriculum.

## Japanese

11 Elementary Japanese I (4)
Introduction to the sound system and grammatical structures necessary to develop listening and speaking skills in Japanese. Initial reading and writing exercises with some of the basic Japanese characters. An appreciation of Japanese culture underlies the orientation of the course. Laboratory required.

## 12 Elementary Japanese II (4)

Continuation of development of skills begun in Japanese 1I, with increased emphasis on vocabu-
$1_{\text {ary expansion, idiomatic expression, and cultural }}$ differences. Increased attention to acquisition of skills in reading and writing Japanese characters. Laboratory required.

## 21 Intermediate Japanese I (4)

Continuation of development of proficiency in listening and speaking, while expanding reading
and writing skills, using materials of a literary or cultural nature. Review of grammar included. Laboratory required.

22 Intermediate Japanese II (4)
Builds upon and enhances the proficiency developed through course 21 by reading short works of fiction and nonfiction and through discussion and writing practice.

80 Directed Independent Study

## Spanish

## 11 Elementary Spanish I (4)

Introduction to the sound system and grammatical structure necessary to develop listening, speaking, reading, and writing slcills in Spanish. A n appreciation of Spanish-speaking culture underlies the orientation of the course. Laboratory required.

12 Elementary Spanish II (4)
Continuation of the development of slcills begun in Spanish 11, with increased emphasis on vocabulary expansion, idiomatic expression, and cultural differences. Laboratory required.

12 Y Intensive Elementary Spanish (4) Designed to prepare students with some background in Spanish (as determined by placement tests) for Spanish 21. A one-term equivalent of Spanish 11 and 12, which provides intensive review of the fundamental grammatical features of modem Spanish through practice in the fourlanguage skills. Enrollment by placement only. Laboratory required.

## 21 Intermediate Spanish I (4)

Continuation of development of proficiency in listening and speaking, while expanding the read. ing and writing skills, using materials of a literary or cultural nature. Grammar review included. Laboratory required.

22 Intermediate Spanish II (4)
Builds upon the proficiency developed through Intermediate Spanish I. Reading of short worlcs of fiction and nonfiction with discussion and written assignments in Spanish on cultural and literary topics.

25 Composition and Conversation (4) For students who have credit for Intermediate Spanish I or demonstrate proficiency beyond that required for enrollment at that level. Emphasis on idiomatic expression through guided oral and written practice. Review of basic phonology, grammar and syntax included.

## 26 Spanish Civilization (4)

Survey of the culture and civilization of Spain.
Areas of study include history, geography, politics, the arts, daily life, traditions, and cultural values.

27 Latin American Civilization (4)
Introduction to Latin America through its Iberian,

Indian, and African heritage; its social institutions; its religious and social customs, festivals, and folklore; its language and other systems of communication; its literature and arts; and its diversions and cuisine.

## 31 Survey of Spanish Literature I (4)

Introduction to representative authors and worlcs from Spanish Medieval, Renaissance, and Golden Age literature.

32 Survey of Spanish Literature II (4) Survey of the major movements, principal authors, and representative worlcs in Spanish literature since 1700 .

36 The Spanish Language (4)
Study of modem descriptive linguistic principles, survey of the historical development of Spanish from the Middle Ages to the present, and analysis of the phonology, morphology, syntax, and semantics of modem Spanish.

## 37 Readings in Spanish-American Literature (4)

Introduction to the major authors and representative worlcs of Spanish America, with concentration on the age of Modernism to the present.

39 Foreign Studies in Contemporary SpanishAmerican Culture. (4)
Through lectures, literary readings, and visits to areas of cultural interest, students familarize themselves with contemporary Spanish-American life, as well as with the contributions of Indian cultures to contemporary Spanish-American society. Research on a cultural topic will culminate in a written project. Offered primarily in Costa Rica with additional study in Mexico.

## 40 Advanced Spanish Oral and Written

 Expression (4)Prerequisites: Spanish 25 or 49 and one 30-level course, or permission of instructor.
This course is designed for advanced students to perfect their spoken and written Spanish. Emphasis is on sustained expository, persuasive and rhetorical communication; on advanced grammar usage and syntax; and on precision in the production of phonemes and intonational patterns.

45 Nineteenth Century Spanish Realism and the Generation of 1898
Readings and discussion of major works of Spanish peninsular literature from the age of Realism (c. 1850) through the Generation of 1898, including worlcs by Galdós, Unamuno, Benavente, Valle-Inclán, and Pio Baroja.

## 47 Spanish-American Narrative (4)

Study of the development of the Spanish-American narrative from the period of discovery and conquest to the present, with emphasis on contemporary writing. Indigenous works such as the Mayan

Popul-Vuh are also considered. Examination of historiography, the essay, novels and short stories.

## 49 Foreign Study in Spanish Language (4)

 For students who have credit in Spanish 21 and demonstrate proficiency beyond that level. Emphasis on idiomatic expression in speech and writing with review of fundamentals of Spanish grammar. May be taken twice, in Spain and Costa Rica.50 Foreign Study in Spanish Civilization (4) Cultural history of Spain, with emphasis on Spanish painting and architecture. Visits to museums and historic sites in Madrid and during the land tour of Spain.

53 Foreign Study in Spanish American Literature (4)
Overview of contemporary Spanish American literature, focusing on the poetry, narrative, and drama of the country. Readings and discussions of representative texts complemented by viewing of selected works in the theatre.

54 Foreign Study in Spanish Literature (4) Overview of contemporary Spanish literature, with concentration on the drama. Readings and discus-
sion of modern plays, with viewing of selected worlcs in Madrid theatres.

## 55 Spanish Literature of the Twentieth

 Century (4)Survey of the predominant literary movements, writers, and works (essay, short story, novel, drama, and poetry) of twentieth century Spain from the period following the Generation of 1898 to the present.

## 57 Golden Age Spanish Drama (4)

Readings and discussion of Spanish dramatic worlcs of the sixteenth and seventeenth centuries, including selections by Lope de Vega, Tirso de Molina, Ruiz de Alarcón, and Calderón.

## 58 Cervantes (4)

Emphasis on Don Quixote, one of the masterpieces of world literature, with additional readings from Cervantes' Novelas ejemplares and Enaemeses.

75 Senior Seminar in Spanish (4)
The opportunity to address a topic, period, author, or genre in depth. The student is provided a chance to synthesize the experience of previous course worlc in a research project.


80 Directed Independent Study
95 Special Topics in Spanish (4)
The opportunity to address a topic not normally covered in the standard curriculum.

## Modern Languages and Literatures

28 Language House-Contemporary Issues (4)
Prerequisites: Completion of at least the 21-level language course. Students must be assigned to live in the language houses, with selection determined by application.
Using primarily media such as newspapers, magazines (accessible through the Internet), film, and TV (accessible through satellite transmission), students living in the language houses meet regularly to discuss current topics of concern to the societies under study. They lceep a journal throughout the year and present a project at the conclusion of the course in oral and written form. The target language is used for all discussions and written work. (Section A $=$ Chinese, Section $\mathrm{B}=$ French, Section C = German, Section D = Japanese, Section E = Spanish.) Students register for zero hours credit each of the first two terms (fall and winter), receiving a grade of S or U .
Registration for the spring term is for 4 hours and students earn a letter grade.

A34 Survey of Chinese Literature
The development of literature in China from its beginnings to the modern period. Through study of representative works in English translation, the course offers an overview of Chinese literature and examines the role of culture and society in this Asian literature.

A35 Classic Chinese Fiction (4)
The classic Chinese novel and short story in English translation. Students read and analyze important works of all major dynasties from ancient times through the nineteenth century and discuss the role of culture and society in Chinese literature.

## A36 Twentieth Century Chinese

 Literature (4)The development of modem Chinese literature in all genres. Through the study of the most representative works in English translation this course considers the relationship between literature and society in twentieth century China.

## A37 Modern Japanese Literature (4)

Survey of the development of modem Japanese literature from 1858, when Japan opened its doors to the west. Students read representative texts in English translation by major writers in various genres.

## A38 African Literature (4)

Introduction to some of Africa's internationally acclaimed writers. Focus on the literary evocation
of African culture and society. The difficulties of understanding ethnic thought, values and mores are considered in light of the development of Africa's distinctive literary tradition.

A50 Foreign Studies in Chinese Culture (4) Study of the Chinese people, society, culture and civilization. Offered abroad.

## Linguistics

## 21 General Linguistics (4)

Introduction to the nature, structure, and functions of human language. Topics include design features of language; phonology, morphology, and syntax; semantics; and language variability.

51 Introduction to Romance Linguistics
Prerequisites: two courses above 21 in French or Spanish.
An introduction to descriptive, historical, and applied linguistics with reference to the romance languages, specifically French and Spanish.
80 Directed Independent Study
(4)

## Methods

64 Teaching Foreign Languages in the Elementary School (3)
Prerequisites: Admission to the Teacher Education Program and Education 01 and 02 or permission of instructor.
The opportunity to review, develop and practice the techniques appropriate for teaching foreign languages in the elementary school.

65 Teaching Foreign Languages: Methods
Prerequisites: Admission to the Teacher Education Program and Education 01 and 02 or permission of instructor.
Introduction to a variety of language-learning theories, with opportunities to develop materials and practice techniques appropriate to teaching foreign languages on any level. Field observations required. Emphasis on the teaching of the four skills, testing, culture, technology, and the development of foreign language proficiency.

## 74 Teaching English to Speakers of Other

 Languages (4)Development of linguistic, cultural, and pedagogical competence in teaching English as a second or foreign language. Open to all students.

80 Directed Independent Study
(4)

95 Special Topics in Teaching Methods (4) The opportunity to address a topic not normally covered in the standard curriculum.


## Music

Professors: Beckford, Chesebro, Fuller, Maag, Morgan, Schoonmaker, Thomas (Chair), Viclc Associate Professors: Hiclcen, Joiner, Kilstofte, Koppelman, Leaman, Malvern, Parsons, Tomplcins
Assistant Professors: Britt, Thompson-Broussard
Music 20 satisfies the General Education requirement in fine arts. Non-music majors who elect to take two terms of applied music for credit may substitute four hours of music theory for Music 20. Music majors take Music 21 and 22 to fulfill the General Education requirement in fine arts.

## Majors

The Bachelor of Music degree is offered with a major in performance, church music, music education, and music theory. Students desiring to pursue the Bachelor of Music degree should apply for departmental approval of their major in the spring term of their sophomore year.

In addition, students may choose music as a major toward the Bachelor of Arts degree.

A major will complete the following courses: Music 16, 17, 21, 22, 23, 24, 25, 34, 37, 41 and 42.

Candidates for the B.A. degree will, in addition, complete the equivalent of 10 semester hours in applied music, and Philosophy 22 or Interdisciplinary Studies 30.

Candidates for the B.M. degree will take additional courses as follows:

Performance majors: Music 31, 32 (or 2-hour music elective), $33,35,36,37,43$, and 32 semester hours in the major applied music field. Piano majors take Music 68 for two of their applied hours. Voice majors take Music 74 for two of their applied hours. Performance majors present a half recital in their junior year and a full recital in their senior year. All students giving recitals must receive approval of the music faculty approximately one month before the recital date.

Church music majors: Music 31, 32 (or 2-hour music elective), $33,37,38,44,46,47$, 60 , and 18 semester hours in the major applied field (organ or voice), and 6 semester hours in the secondary applied field (voice, organ or piano).

Theory majors: Music 31, 32, 33, 35, 36, 37, 48, 80 (Independent Study, to be taken twice), and 24 hours in applied music, to
include (a) a minimum of 12 semester hours of piano, or the achievement of the required piano proficiency level established for theory majors (Students entering Furman with extensive piano background who can meet the proficiency requirement with fewer than 12 hours of piano may take applied music in some other instrument instead of completing the remaining hours in piano.); and (b) Music 27 (String Class), 28 (Woodwind Class), and 29 (Brass and Percussion Class); or 2 hours of applied music study within each of the above groupings of instruments.

Music education majors (students planning for teacher certification): Computer Science 16 (or major department equivalent); Psychology 21 ; two lab courses in the sciences (one physical, one biological); Education 11/01, 20, 21 , and 75 ; Music $33,37,38$ or 39,60 or 61 ; and applied music as follbws.

Except for the term when they are teaching interns, music education majors must study applied music during every term of their Furman experience.

Band or orchestra embhasis: 13 semester hours in major applied field, 3 semester hours in piano proficiency, and Music 27, 28, 29 and 49.

Elementary music/choral emphasis: 19 semester hours in major applied field (vocal major takes all applied hours in voice, piano major takes a minimum of 8 hours in voice), 3 semester hours in piano proficiency, and Music 49.

All music education majors must meet the departmental piano proficiency examination requirement. Once a music education major has met this requirement, hours specified in piano may be taken in another applied music area. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission into the Teacher Education Program and other pertinent information.

Upon the completion of all course requirements for the degree Bachelor of Music in music education, students will be certified by the state of South Carolina to teach either K-12 instrumental music or K-12 choral/ general music based upon the course track within the degree program.

All Bachelor of Music majors must pass the Piano Proficiency Requirement. Most students will prepare for this exam by taking Music 72 for three terms. Students with a strong background in piano who wish to study individually in preparation for the exam should discuss this with the Kevboard Area Coordinator.

All music majors are required to complete 10 terms of Student Recital (MUS 06 attendance at a specified number of on-campus concerts and recitals). In addition, music majors are required to be members of one of the following major ensemble organizations on campus: Marching Band, Symphonic Band, Symphony Orchestra, Furman Singers, Furman Chorale. Juniors and seniors majoring in keyboard performance may fulfill the ensemble participation requirement by accompanying applied music lessons.

Furman University is a member of the National Association of Schools of Music. Requirements for entrance and for graduation are in accordance with the published regulations of that body.

All students must perform an applied music audition and take a music theory placement examination prior to consideration for admission to curricula leading to a degree in music.

All students desiring to initiate applied music study, whether as a major or elective, are required to have an audition.

MUS is the prefix for music courses on schedules and transcripts.

01 Furman Singers (0)
02 Furman Chorale (0)
03 Furman Bands (0)
04 Symphony Orchestra (0)
06 Recital Attendance (0)
07 Opera Worltshop (0)
08 Woodwind Ensemble (0)
09 Brass Ensemble (0)
10 Percussion Ensemble (0)
11 Jazz Ensemble (0)
12 Jazz Combo (0)
14 Chamber Choir (0)
15 Concert Band (0)
16 Studies in Music: History, Philosophy, and Practice (2)
An overview of the study of music from historical, philosophical, aesthetic, analytical, and performance perspectives. Also covers a wide variety of issues pertinent to today's musician, including
discussions of performance, preparation and practice, the ensemble experience, and careers in music.

17 Introduction to Music Technology (2) Topics include computer basics, e-mail and Internet communications, lceyboard synthesizers and MIDI concepts, entry-level sequencing and notation programs, computer-assisted instruction, and multimedia. Goals of the course are lab competence (including troubleshooting skills) and completion of an individual creative project. (Lab fee required.)

19 Voice Class (0) (2)
Basic fundamentals of correct singing (posture, breathing, tone production). Beginning studies in vocal repertoire. (Lab fee required.)

20 Introduction to Music
An introductory course inviting students to learn fundamentals of music, explore a variety of musical genres, and develop an appreciation of the diverse musical genres. Although the "focus" for each section varies, all sections address certain fundamentals of music: listening skills, cultural context, historical development, musical vocabulary, musical structure, and style. This course requires out-of-class listening and attendance at live concerts. A description of the sections from which a student may choose is published during the enrollment period for each term.

21 Basic Theory I: Introduction to Music Theory (2)
Overview of keys, scales, modes, intervals, rhythm, meter, triads, seventh chords, voicing, and principals of four-part texture.

## 22 Basic Theory II: Techniques of Diatonic

 Music I (2)Part writing, tonic and dominant, inversions of tonic, dominant, and leading tone chords, inversions of the dominant seventh, and dominant preparatory chords.

## 23 Basic Theory III: Techniques of Diatonic Music II (2)

The cadential six-four, other dominant preparatory chords, non-dominant seventh chords, and modulation to the dominant, mediant and sub-tonic chords (modulation to the mediant).

24 Basic Theory IV: Techniques of Chromatic Music I (2)
Review of diatonic vocabulary, sequences and associated techniques, melodic and rhythmic figuration (non-harmonic tones), leading tone seventh chords, applied dominant and leading tone chords (secondary dominants), and modulation to closely related keys.

## 25 Basic Theory V: Techniques of Chromatic Music II (2) <br> Mixture (modal borrowing), ninth chords, phrygian two (Neapolitan sixth), augmented sixth chords, augmented triads, common-tone diminished sevenths, chromatic voice-leading techniques, and remote key relationships.

## 27 String Methods <br> (2)

Designed to produce a level of proficiency needed to teach violin, viola, cello and bass in the public schools.

## 28 Woodwind Methods (2)

Pedagogical approach to learning the basic fundamentals of each member of the woodwind family.

## 29 Brass and Percussion Methods

Study of brass and percussion for the purpose of teaching skills and knowledge of each instrument, as well as techniques of performing and scoring.

## 31 Sixteenth Century Counterpoint

Prerequisite: Music 34.
Modal counterpoint: study of the ecclesiastical compositional style of the sixteenth and early seventeenth centuries; emphasis upon two-voice and three-voice counterpoint.

32 Composition (2)
Prerequisite: Music 34.
Class instruction in the craft of composition. Technical studies designed to stimulate creative thought and develop technical mastery are supplemented by analysis and discussion of representative models. Course culminates in reading sessions of student works in open forum.

## 33 Orchestration (2)

The craft of orchestration through knowledge of transpositions, ranges of instruments, actual scoring for string, woodwind, brass, and percussion sections, and finally culminating in a scoring for full orchestra. Music copying slcills are developed.

34 Form and Analysis (4)
Prerequisite: Music 25.
The examination of musical design and structure through in-depth analysis and discussion of representative works from the common practice era and the twentieth century. Includes reductive, motivic, and thematic analysis, the study of phrase structure and combination, cadences, and their relation to and impact on the overall architectures of procedural, concerted, articulated, and additive forms.

35 Invention and Fugue
Prerequisite: Music 34.
Analysis and writing of principal contrapuntal forms
of the eighteenth century; two-part and three-part inventions and fugues of varying voices.

## 36 Twentieth Century Styles and

 Techniques (2)
## Prerequisite: Music 34.

Determining twentieth century compositional techniques through the analysis of representative compositions. This analysis begins with early twentieth century conservatism, proceeds through the destruction of tonality, continues with the "twelve-tone" method, and ends with aleatory (chance), electronic, and experimental techniques.

## 37 Basic Conducting (2)

The basic skills required of a conductor: beat patterns, cuing, expressive and functional use of the left hand, introduction to score study.

## 38 Choral Conducting

Prerequisite: Music 37.
A continuation of Music 37. Discussion and class performance in areas of rehearsal technique, advanced conducting analysis, criteria for selecting music, and continued development of general conducting slcills. Videotaping as well as written and verbal critique of conducting actions included.

## 39 Instrumental Conducting

Prerequisite: Music 37.
Designed to develop students' skills and knowledge of ensemble conducting, acquaint them with a variety of musical repertoire and styles both instrumental and vocal, and develop their ability to research and prepare musical scores and administer musical ensembles.

## 40 Introduction to Musicology

Prerequisite: Music 23.
An introduction to musical research and investigation with emphasis on research techniques. Topics include development of writing slcills for critical review; evolution of music notation and modem editions; identifying relevant monographic and periodical literature.

41 History and Literature of Music I
Prerequisites: Music 16, 34.
The development of musical styles from the early Christian era to 1750 . Cultural backgrounds and influences, important composers, and representative musical examples of each stylistic period.

42 History and Literature of Music II
Prerequisites: Music 16, 34.
The development of musical styles from 1750 to the present. Cultural baclcgrounds and influences, important composers, and representative musical examples of each stylistic period.

43 Literature of the Instrument (2) Survey of the musical literature of a particular performance area. Students (typically performance majors) channel their research and study toward their own performance specialty and survey the general body of compositions written for that medium.

## 44 Church Music Ministry

Prerequisite: Music 34.
The relationship of the music ministry to the church functions of worship, education and evangelism; the varying roles of music in the church and aspects of administering a program of church music.

## 45 Projects in Music Technology (2)

Prerequisite: Music 17 or equivalent and consent of instructor.
A continuation of Music 17, but with a focus on applied study of music technology, involving both individual and group lessons. Possible topics to include: digital audio recording/editing, advanced MIDI applications, performance with technology, and Internet music resources. Students develop an extended creative project and produce appropriate documentation (live presentation, audio CD, videotape, web site, CD-ROM, etc.)
May be repeated for credit. (Lab fee required.)

## 46 Hymnology (2)

Prerequisite: Music 34.
Survey of major developments in hymnody - both hymn texts and hymn tunes - from the early Christian era to the present.

47 Church Music Literature
Prerequisite: Music 34.
Survey of music written primarily for church performance from the early Christian era to the present, with primary attention given to choral literature: the mass, motet, anthem, cantata and oratorio.

## 48 Advanced Harmony

Prerequisite: Music 34.
Analysis of the techniques and materials used in all levels of tonal music. Schenlcerian principles of analysis introduced, with practical application to the understanding of tonal organization and continuity.

## 49 Vocal/Choral Methods (2)

Prerequisite: Prior vocal training.
Comprehensive study in methods of teaching vocal production in the choral setting and the private studio. Considerable emphasis on breathing, phonation, diction, intonation. In addition to the adult voice, consideration is given to the child and adolescent vocal technique. Designed to develop teaching skill.
creative ideas in teaching music at both elementary and secondary levels. The first part concentrates on methods and techniques suitable for use with elementary age children; the second, on methods and techniques suitable for older children. Among the variety of methods studied are those used by Kodaly, Orff, and Dalcroze.

61 Instrumental Music Methods
Prerequisites: Education 01 and 02 or permission of instructor.
Comprehensive study in methods of teaching instrumental music for the elementary, middle, and secondary school. Considerable emphasis on philosophy, objectives, and teaching techniques of the various instrumental ensembles.

68 Applied Piano in Chamber Ensemble (1) The study and performance of chamber music literature involving the piano. The repertoire to be studied will be chosen from the standard chamber music literature, subject to the approval of the applied piano teacher, and will be coached during the student' s weekly applied piano lesson.

69 Music for the Elementary School
Teacher (2)
Satisfies the state requirements for certification in elementary education. Basic music terms and definitions as well as methods appropriate for music instruction in the elementary classroom.

70 Class Guitar I (0) (2)
An introduction to guitar skills. Intended for students with no guitar skills. Emphasis is on achievement of basic proficiency in chord playing, note reading, strumming patterns, and basic finger styles. (Lab fee required.)

71 Class Guitar II (0) (2)
Continuation of Class Guitar I. Emphasis is on chord playing, note reading, strumming patterns and basic finger styles through learning various songs. Also designed for students with prior guitar playing experience. (Labfee required.)

72 Piano Proficiency Class ( $0,1,2$ )
72F (fall term).
72W (winter term). Prerequisite: Music 72F or permission of instructor.
72 S (spring term). Prerequisite: Music 72 W or permission of instructor.
Piano class for all students in a Bachelor of Music degree program. The three-term sequence emphasizes harmonization, transposition, sight reading and other keyboard slcills leading to the completion of proficiency requirements.
(Lab fee required.)

## 74 Stage Techniques in Opera

Vocal interpretation and characterization of operatic roles, moving to music, understanding theater skills and conventions, preparation and performance of opera scenes.

## 77 Class Piano, Beginner ( 0,2 )

First-year piano for students with little lceyboard knowledge. Early study is devoted to keyboard orientation and functional lceyboard slcills. Later, the study of the styles and literature of the piano is pursued through standard repertoire. (Lab fee required.)

78 Class Piano, Advanced $(0,2)$
For students with some previous lceyboard training. Knowledge of basic rudiments of music is assumed, and emphasis is placed on developing pianistic fluency through standard repcrtoire and finger exercises. (Lab fee required.)

80 Independent Study (4)
Investigation of a topic not duplicated among the regular course offerings.

## 95 Special Topics in Music (2-4)

To register for private lessons in the following subjects, students must have permission of the instructor:

73 Harp (0-4)
Lab fee required.
75 Harpsichord (0-4)
Lab fee required.
76 Classical Guitar (0-4)
Lab fee required.
79 Piano (0-4)
Lab fee required.

81 Organ (0-4)
Lab fee required.
82 Voice (0-4)
Lab fee required.

83 Violin (0-4)
Lab fee required
84 Viola (0-4)
Lab fee required.
86 Cello (0-4)
Lab fee required.
87 String Bass (0-4)
Lab fee required.
88 Flute (0-4)
Lab fee required.
89 Oboe (0-4)
Lab fee required.
90 Clarinet (0-4)
Lab fee required.
91 Saxophone (0-4)
Lab fee required.
92 Bassoon (0-4)
Lab fee required.
93 Trumpet (0-4)
Lab fee required.
94 Horn (0-4)
Lab fee required.
96 Euphonium (0-4)
Lab fee required.
97 Tuba (0-4)
Lab fee required.
98 Percussion (0-4)
Lab fee required.
99 Trombone (0-4)
Lab fee required.

## Philosophy

Professors: Buford, Edwards, Shaner (Chair) Assistant Professors: Epright, Hurley, Stone, Worth

## Majors

To graduate with a major in philosophy, a student must have an overall grade-point average of 2.0 on all philosophy courses. The philosophy major consists of eight to eleven philosophy courses; it will normally include Philosophy 31 and 32 . A student should consult the department chair for individual planning of the major program.

Philosophy 20 is a prerequisite to all other philosophy courses (including A43, A44 and A45) except Philosophy 21. At the discretion of the instructor, students may be admitted to a philosophy course beyond Philosophy 21 without having had Philosophy 20.

PHL is the prefix for philosophy courses on schedules and transcripts.

20 Introduction to Philosophy (4) Some of the classic problems of philosophy, with emphasis on understanding the nature of philosophic reflection and reasoning. Includes epistemology, ethics and other major branches of philosophy.

## 21 Logic (4)

Rhetorical and formal analysis of arguments with emphasis on symbolic logic.

22 Philosophy of Art (4)
A study of the nature of art and the possibility of standards of judgment. Readings include Aristotle, Plato, Kant, Dickie, Danto.

## 23 Ethics (4)

The nature of morality, the grounds of moral obligation, and the principles of moral decision according to classical and contemporary moral philosophers.

## 28 Medical Ethics (4)

Focuses on major moral issues in our health care delivery system. Some issues treated are doctor/ patient relationships, truth-telling, refusal of lifesaving treatment, euthanasia, and allocation of

scarce medical resources. This course includes field work in the Greenville hospital system.

30 Philosophers, Movements and Problems (4) Prerequisite: one course in philosophy; Humanities 11,12 , or 13 ; or approval of professor.
Designed to meet the needs and interests of students who would like to do further work in philosophy by investigating a particular philosopher, movement or problem.

31 Historical Foundations of Philosophy I
The growth and development of philosophical thought from Thales to William of Occam.

32 Historical Foundations of Philosophy II The growth and development of philosophical thought from Descartes through Kant.

33 Nineteenth Century Philosophy (4) A survey of Continental philosophy, with a special emphasis on the structure and impact of the Darwinian Revolution. Readings include Hegel, Schopenhauer, Marx, Kierkegaard, Whewell, Darwin, Huxley and Spencer.

34 Law, Justice and the State
Examination of classical and contemporary issues in political philosophy, with particular attention to the philosophical foundations of the state and the political and moral relationship of the individual to the state.

35 Philosophy of the Person (4)
Investigation of the nature of the person. Readings include Plato, Augustine, Nietzsche, Cassirer.

## 36 Philosophy of Science (4)

Understanding the scope, structure, and limits of the scientific method. Special attention is given to biology, psychology, and the implications of evolutionary theory.

## 37 Philosophy of Religion (4)

The central philosophical issues in religious concerns, including the problem of evil, religious knowledge and the nature and significance of religious experience.

## 38 Philosophy of Law (4)

Investigation of philosophical questions relating to law, such as the question of what law is, the responsibility of the individual faced with unjust law, and the relation between philosophical understandings of the law and the resolution of legal issues. Readings include philosophical treatments of law and texts of legal opinions from courts.

## 41 American Philosophy (4)

A history of American philosophy organized around the theme of the search for authority. Readings in Edwards, Emerson, Fiske, Royce, Bowne, and Dewey.

## 42 Twentieth Century Philosophy (4)

Introduction to the important figures and themes of twentieth century philosophy. Attention given to material from both the analytic and phenomenological traditions. Postmodern responses to these traditions also examined.

A43 Indian Philosophy (4)
Survey of six orthodox and three heterodox schools including Advaita Vedanta, Yoga, Samlchya,
Mimamsa, Nyaya, Vaisesika, Early Buddhism, Jainism and Ajivika Materialism. Comparative (East/West) analyses are explored.

## A44 Chinese Philosophy (4)

Survey of traditional problems and history with emphasis on the classical Chinese philosophical tradition including Confusius (Kung Tzu), Mo Tzu, Lao Tzu, Chuang Tzu, Hsün Tzu and Han Fei Tzu.

## A45 Japanese Philosophy (4)

Survey of development of Japanese philosophical thought from the Heian period to modem times. Analysis includes early Buddhism, Kükai's Shingon Buddhism, Dogen's Soto Zen philosophy, its encounter with the West and development of the Kyoto school.

## 46 Philosophy of Gender (4)

Examination of competing feminist theories; for example, liberal feminism, socialist or Marxist feminism, radical feminism and others. The goal of the course is to analyze the philosophical assumptions concerning women and women's situations that underlie each view and to examine the philosophical traditions from which each theory developed and the philosophical theories in opposition.

75 Seminar in Philosophy (4)
Intensive treatment of one or two major issues or areas of philosophic debate.

80 Independent Study (2-4)
Either a research project or a reading program.
Admission to either is by permission of the department. To be admitted to the research project, a student must have a 3.0 grade-point average in philosophy courses (a minimum of three) and an overall average of 2.7.

## 95 Special Topics in Philosophy

## Physics

Professors: Brantley, Turner
Associate Professors: Baker (Chair), D'Amato
Physics courses which satisfy the General Education requirement for B.A. degree candidates are Physics 11, 12, 14, 15 and 17. Physics 14, 15, 17 and 19 are designed especially for non-science majors. B.S. candidates would normally select Physics 11 and/or 12 for the General Education requirement.

## Majors

The Department of Physics administers majors in physics and in pre-engineering. Students majoring in either field must have a minimum grade point average of 2.0 in all physics courses, and must take a comprehensive examination in physics.

The physics major consists of 40 semester hours: Physics 11 and 12 , which satisfy the General Education Requirement, plus Physics $13,20,21,23$ or $35,26,30,41$, and one from Physics 32, 39, 42, 43, 44, 45, 47, 60 (for students seeking secondary-school certification), 80,85 , or 95 ; plus a non-credit senior seminar consisting of Physics 75, 76 and 77. Majors intending to pursue graduate study in physics should take physics courses beyond the minimum: plus additional courses in related fields.

The dual-degree engineering program normally consists of three years at Furman and two years at Auburn University, Clemson University, Georgia Institute of Technology, North Carolina State University or Washington University at St. Louis. The Furman degree is awarded with a major in either pre-engineering or physics. Degree requirements vary depending on the Furman major pursued and the engineering school attended. Details are available from the Department of Physics. The Furman degree is awarded after successful completion of an appropriate portion of the engineering curriculum at the engineering school. The engineering degree is awarded upon completion of the entire program. A minimum grade-point average of 2.6 is required to declare as a pre-engineering major. Students interested in pursuing this major should obtain a copy of the document Furman University Dual-Degree Program in Engineering from the Department of Physics.

All prospective majors are urged to take prerequisite mathematics and physics courses
as early as possible. In particular, it is advisable to complete Physics 20 by the spring of the sophomore year.

Majors wishing to pursue a career in teaching must complete Computer Science 16 and Education 11/01, 20, 21, 50/02, 54 (or major department equivalent), 167 and 171, and one course from Physics 32, 39, 42, 43, 44, 45, 47 or 60 , in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education Program and other pertinent information.

PHY is the prefix for physics courses on schedules and transcripts.

11 General Physics I (4)
Prerequisite: Mathematics 11 or high school calculus.
The basic concepts and laws of classical mechanics. Measurement and units, vectors, kinematics, Newton's laws of motion, work and energy, systems of particles, collisions, rotational kinematics, torque and angular momentum, rigid body statics and dynamics, simple harmonic motion, gravitation, and mechanics of solids and fluids.
(Lab fee required.)
12 General Physics II
Prerequisite: Physics 11.
(Mathematics 12 strongly recommended.)
The basic concepts and laws of classical electricity and magnetism. Electrostatic and magnetostatic forces and fields. Gauss' law, electric circuits, Ampere's law, Faraday's law, electric and magnetic properties of matter, time-varying fields, Maxwell's equations and electromagnetic waves, and geometrical optics. (Lab fee required.)

## 13 General Physics III (4)

Prerequisite: Physics 11.
Introduction to thermodynamics and wave motion. Temperature, The First Law, kinetic theory, The Second Law, sound, electromagnetic waves, superposition, interference, diffraction and polarization. (Lab fee required.)
14 Energy-of Man, Creation and Calories
The concept of energy treated from the broadest possible perspective. Emphasis on the four laws of thermodynamics and the four black-hole analogs. With this foundation the various thermodynamic aspects of energy are treated as they relate to a variety of areas.

15 Descriptive Astronom
(4)

The celestial sphere; apparent motion of the sun, moon, and planets; light and telescopes; Planet Earth and the solar system; stellar spectra; the structure, properties, and evolution of stars; black holes; galaxies; cosmology. No prior lcnowledge of science is assumed, and only high-school algebra is prerequisite. (Lab fee required.)

17 Survey of Physics for Non-Science Majors (4)
A philosophic and conceptual examination of selected fundamental principles of physics. No prior knowledge of science is assumed, and only highschool algebra is prerequisite. Some historical and biographical material is included.

## 19 Science of Music <br> (4)

20 Introduction to Modern Physics
Prerequisites: Physics 12, 13.
Corequisite: Mathematics 21.
Special theory of relativity, particle nature of
electromagnetic radiation, wave nature of matter, the Heisenberg Uncertainty Principle, historical models of the atom, Schroedinger's equation and its application to one-dimensional systems, quantum theory of the hydrogen atom, electron spin, many-electron atoms, and introduction to nuclear physics. (Lab fee required.)

## 21 Electromagnetic Theory I

Prerequisite: Physics 20.
Coreauisite: Mathematics 22.
Development of the microscopic and macroscopic Maxwell equations. Electrostatic forces and fields, dielectrics, potential theory, magnetostatic forces and fields, time-varying fields and magnetic properties of matter.

23 Electronics (4)
Prerequisite: Physics 12.
Theory and applications of active and passive circuits containing resistors, capacitors, inductors, transistors and integrated circuits. The course is

laboratory oriented. Students build and analyze circuits involving these components in various applications, including active and passive filters, transistor amplifiers, operational amplifiers, power supplies and digital circuits.
(Labfee required.)
26 Classical Mechanics I
Prerequisite: Physics 20.
Corequisite: Mathematics 22.
Kinematics and dynamics of particles and systems of particles, oscillations, introduction to Lagrangian and Hamiltonian dynamics, central force motion, motion in non-inertial reference frames, and dynamics of rigid bodies.

30 Introduction to Quantum Mechanics
Prerequisite: Physics 20.
Corequisite: Mathematics 22.
Introduction to quantum formalism, the simple harmonic oscillator, angular momentum, the hydrogen atom, spin and indistinguishable particles, and applications to nuclear physics. (Lab fee required)

## 32 Optics (4)

Prerequisite: Physics 21.
Geometrical optics, properties of light, coherence, interference, diffraction, optics of solids, optical spectra, Fourier optics, and lasers.

## 35 Experimental Methods in Physics

Prerequisite: Physics 20.
Experiments in classical and modem physics designed to give practice in the art of making precise measurements and manipulating experimental apparatus. (Labfee required.)

## 39 Nuclear Physics (4)

Prerequisites: Physics 30, Mathematics 22.
Recommended: Physics 26.
Particle in a potential well, the nuclear force, the deuteron, complex nuclei, nuclear decay, compound-nucleus and direct reactions, experimental methods and applications. (Lab fee required.)

41 Thermodynamics and Statistical
Mechanics (4)
Prerequisite: Physics 20.
Laws of heat and thermodynamics, lcinetic theory of gases, introduction to statistical mechanics.

42 Classical Mechanics II
Prerequisite: Physics 26.
An advanced treatment of topics studied in Physics 26, plus gravitation, coupled oscillations, mechanics of continuous media, the onedimensional wave equation, and relativistic kinematics and dynamics.

44 Electromagnetic Theory II
Prerequisite: Physics 21.
A continuation of Physics 21. Relativistic electrodynamics, application of Maxwell's
equations to radiating systems, and properties of electromagnetic waves.

45 Quantum Mechanics (4)
Prerequisites: Physics 30, Mathematics 22.
Duality of matter and radiation, state functions, linear momentum, the Schroedinger equation, systems of particles, angular momentum and spin.

## 47 Introduction to Astronomy and

 Astrophysics (4)Prerequisite: Physics 20 or permission of instructor. Survey course in introductory astronomy and astrophysics for science majors. Gravitation and planetary motion; evolution and structure of the solar system, galaxy, and universe; stellar classes, structure and evolution. Laboratory activities include the study of spectra as well as observation and astronomical photography. Credit is not normally granted for both Physics 15 and 47. (Lab fee required.)

## 54 Biomechanics (4)

Prerequisites: Biology 11, Math 11, Physics 11. Same as Health and Exercise Science 54. Integrates the principles of biology and mechanics as they relate to human motion and includes analysis of energy transduction in human motion as it relates to posture, mechanical worlc and gravity. Course is split equally between lecture and laboratory applications. Students complete and present a motion analysis study related to human performance, energy transduction and their interdependence. (Lab fee required.)

60 Teaching Methods and Materials in Physics (4)
By approval of department.
75, 76 and 77 Senior Seminar in Physics (0) Prerequisite: senior standing or permission of the department.
A weekly seminar held throughout the senior year in which students prepare and present a paper on an approved topic, attend presentations by other students, faculty, and invited speakers, and prepare for a required comprehensive examination in physics. The paper may be on work done in previous courses or in undergraduate research.

80 Directed Independent Study (4)
Study of selected topics designed to instill deeper understanding of areas of physics beyond formal course work.

85 Research in Physics (4)
Guided experimentation or theoretical research on selected topics, with the potential for publication of results or presentation of findings at professional meetings.

95 Special Topics in Physics

## Political Science

Professors: Aiesi, Fraser (Chair), Gordon, Guth
Associate Professors: Bressler, Halva-Neubauer, Nelsen, Tessitore
Assistant Professors: Palmer, Smith, Torphy, Vinson

To satisfy the General Education requirement in the social sciences, students may select either Political Science 11 or 12 . There are no prerequisites for either course.

Except for Political Science 13 and all Asian-African courses offered by the department, Political Science 11 and 12 are prerequisites for all other political science courses, unless the consent of the instructor is secured.

## Majors

Majors must take at least eight courses in political science, including those taken to meet General Education requirements. These must include Political Science 11,12 , and at least six additional courses. Majors must take at least one course from the Political Thought group $13,60,61$ and 62 , or an alternate course approved by the department. All seniors with an overall 3.0 grade-point average are required to take Political Science 75 or 78 . Students planning to major in political science should consult with the chair or another faculty advisor in the department to select specific courses suited to their individual interests and needs.

PS is the prefix for political science courses on schedules and transcripts.

## Introductory Courses

11 Introduction to American
Government
(4)

The basic political science course focusing on American national politics. Emphasis on the principles, institutions and politics of the federal government. Topics include the U.S. Constitution, the presidency, Congress, the Supreme Court, political parties and interest groups, and the federal bureaucracy.

12 Introduction to World Politics (4) Emphasis on the similarities and differences between the institutions, processes and policies (both foreign and domestic) of selected nations.

13 Introduction to Political Thought (4) A survey of major political thinkers, focusing on analysis of issues and themes dealing with the nature and limits of politics.

14 Introduction to Political Analysis (4) The methodology of contemporary political science, including research techniquesfor studying political behavior.

## American Politics

20 The American Congress (4)
The development and operation of the U.S. Congress, focusing on its constitutional and political bases. Topics include elections, representation, congressional parties and committees, policy making, and relations with the presidency.

21 The American Presidency
(4)

The constitutional and political evolution of the presidential office, with emphasis on relations with Congress, the federal bureaucracy and the judiciary. Focus on presidential functions such as legislative leadership, budgeting, administrative coordination and making foreign policy.

22 Judicial Process and the
U.S. Supreme Court (4)

The judicial process and the federal system through the case method.

23 Civil Rights and the U.S. Constitution Study of the civil rights of the American constitution through readings and the case method.

24 Public Policy and Administration (4) Study of policy-malting and public administration, with emphasis on such areas as energy, environment, natural resources, education, agriculture, public works, housing and national defense.

25 State Politics (4)
Comparative analysis of politics in the American states. Emphasis on federalism (intergovernmental relations) and on state governmental services and functions.

26 Urban Politics (4)
Study of political problems facing cities, including community power structures, poverty, welfare, education, housing, urban renewal and law enforcement.

## 27 Interest Groups and

Political Movements (4)
Analysis of the role of interest groups and political movements in the United States, with a focus on the origins, maintenance and strategies of these organizations.

## 28 Racial and Ethnic Politics (4)

Examination of African American, Hispanic, Asian American and Native American efforts to organize for effective political action in the face of political, social and economic constraints. Groups are compared to other politically active groups in U.S. politics.

## 29 Women and Politics (4)

Examination of the experience and role of women in the political arena, including such topics as campaigns and elections, political leadership, social movement participation, media coverage, public policy formation and public opinion.

30 Media and Politics (4)
The place of the media as an institution in the American political system. Topics include the nature of the U.S. media, their relationship to the president and the bureaucracy, Congress, the courts and interest groups, the media's role in political campaigns and policy-making, and the media's influence on opinion and political behavior of elites and the public.

## 31 Political Behavior (4)

Formation, organization and change of attitudes about American politics; study of political participation and its correlates. Methods of survey design and analysis including computer adaptations.

## Comparative Politics

40 Politics of Europe (4)
Study of political institutions, policies and processes in European democracies.

41 Politics of the European Union (4) Study of the institutions, policies and processes of the European Union and the major theories of regional integration.

## 42 Politics of Russia (4)

Examination of the impact of change on the development of institutions, policies and culture in post-Soviet Russia.

A43 Politics of Developing Nations (4) Introduction to politics of the non-Western nations, with emphasis on the political development of the Middle East, Africa, Asia and Latin America. Presentation of a comparative framework for understanding diverse political cultures.

A44 Politics of Africa (4)
Comparative study focusing on traditional political structures, the impact of colonialism, and contemporary political systems and parties.

A45 Politics of the Middle East (4)
Focus on the interplay of religion, nationalism,
colonialism and regional conflict in the context of national as well as world politics.

## A46 Politics of China (4)

Examination of the political, social and economic factors affecting the Chinese Communist Party and its relationship to the Chinese citizenry. Analysis of the domestic and international challenges confronting the Chinese state.

A47 Politics of Asia (4)
Examination of the political development of one of the world's most rapidly changing regions. Focus on Japan and its dominant influence in the region. Additional topics include Korean unification and the rise of ASEAN as well as the implications for U.S. foreign policy-makers.

A48 Politics of South Asia (4)
Study of political development on the Indian subcontinent, focusing on the impact of decolonization and the often clashing political cultures and structures.

49 Politics of Latin America
Emphasis on the institutions, processes and policies through which Latin American countries attempt to accommodate the forces of tradition and of political, economic and social change.

50 Politics of Religious Movements
Effects of religious movements on the politics of modernizing societies, comparing Europe, the United States, the Middle East and Latin America.

51 Political Parties (4)
Examination of political parties as they appear in established democracies, emerging democracies, and single-party and authoritarian states. Special emphasis on U.S. political parties in comparative perspective.

## International Relations

55 International Relations (4)
Examination of the sources of conflict and cooperation in the international system and their effects on the development of foreign policy.

56 American Foreign Policy (4)
Emphasis on the nature of U.S. national interests, major foreign policy actors and institutions, and principal modes and patterns of decision-making. American foreign policy toward selected allies and adversaries is also considered.

57 International Political Economy
The relationship between politics and economics on the national and international levels, focusing on the impact of political forces on the functioning of the international economic system.

## Political Thought

60 Classical Political Thought (4)
Analysis of selected works of such writers as Plato, Aristotle, St. Augustine and St. Thomas.

61 Modern Political Thought (4)
Analysis of selected works of such writers as Machiavelli, Hobbes, Loclce, Rousseau, Marx, Mill and Nietzsche.

62 American Political Thought (4)
Analysis of the principles underlying American politics, focusing on the period stretching from the founding through the Civil War.

## Study Abroad

70 Economic and Political Analysis of the European Union (4)
An examination of the formation, implementation and operation of the European Union, with special emphasis on political and economic issues. Taught as an interdisciplinary course as part of the Furman program in Europe. The course is listed under both Economics and Political Science. Students may receive credit for only one of the courses.

## 71 Issues in Central and

East European Politics (4)
Examination of change in Central and Eastern Europe, with emphasis on such topics as the politics of democratization, economic transformation, international security, and environmental degradation and protection.

## A72 Issues in African Politics (4)

Examination of change in Africa, with emphasis on such topics as the politics of democratization, ethnicity, economic development, the environment and international relations.

A73 Issues in Chinese Politics (4) Examination of China in the post-Mao era, focusing on the pressures for reform and the central government's ongoing struggle to maintain control while liberalizing the political and economic system. Includes interviews with government officials and citizens in Shanghai.

## Capstone Courses

75 Senior Seminar in Political Science (4) Prerequisites: Senior status with an overall 3.0 grade-point average, or permission of the instructor. Reading, research and writing course for majors that covers a specific topic in political science.

## 78 Senior Honors Essay

Prerequisites: Senior status with an overall 3.0 grade-point average, or permission of the instructor. Guided research and writing on a topic in any field of political science proposed by the student and approved by the instructor.

## Engaged Learning

80 Directed Independent Study (4) Prerequisites: Consent of the instructor and the department chair.

## 84 Fieldwork in Politics

Through internships and related assignments, students employ various research methods, test previous political science research, and acquire a deeper understanding of domestic and international affairs.

## 85 Fieldwork in State and Local Public Affairs (4)

Through 25-hour-per-week internships in local or state governmental agencies (both political and administrative) or nongovernmental agencies (such as interest groups, media or nonprofits), students are exposed to the way in which subnational policy is formulated, implemented and evaluated. In addition to internships, students attend a weekly seminar that integrates various themes in public administration, public policy and state and local government.

86 The Washington Experience (4) Prerequisites: Political Science 11 and at least sophomore standing.
Internship in a government agency or political organization, with appropriate academic perspectives.

## Special Topics

95 Special Topics in Political Science

## Psychology

Professors: Batson, Brewer, Einstein, Noclcs (Acting Chair)
Associate Professor: Rasmussen
Assistant Professors: Grisel, Pierroutsakos Instructor: Pellew

Psychology 21 and 23 satisfy the General Education requirement in the social sciences.

## Majors

T o graduate with a major in psychology, a student must have an overall grade-point average of at least 2.0 in all psychology courses. Majors must take Psychology 21, 22 and eight additional courses as specified by the department. Majors should talce Psychology 22 immediately following Psychology 21, or as soon as possible thereafter.

Psychology majors may earn either a B.A. or a B.S. degree. Reauirements within the major are the same for both degrees. However, students pursuing the B.S. degree must complete Mathematics 11 to satisfy the General Education requirement in mathematics, and any two courses numbered 11,12 , or 21 from the departments of biology, chemistry, earth and environmental sciences, and/or physics to satisfy the General Education Requirement in the natural sciences.

It is recommended that majors talce as many of the following courses as possible: Biology 11, 26 and 30; Computer Science 16; English 31; Mathematics 11 or 16 and 30; Philosophy 20; and Communication Studies 20. All maiors are required to take the Graduate Record Examination in psychology.

PSY is the prefix for psychology courses on schedules and transcripts.

## 21 General Psychology (4)

Prerequisite for all other psychology courses. Comprehensive introduction to psychology as a behavioral science through a survey of historical, empirical, and theoretical perspectives of psychological research. Topics include biological bases of behavior, development, learning, personality, cognition, perception, motivation, behavior disorders, and social psychology.

## 22 Experimental and Statistical Methods

 Prerequisites: Psychology 21 and a course in mathematics.Introduction to the principles of experimentation, experimental design, hypothesis testing, and statistical analysis (through factorial analysis of vari-
ance). Designed to acquaint students with the experimental study of behavior; covers the basic methodological background necessary for several advanced courses. Lab work, computer analysis of data, and written reports of lab projects are integral parts of the course. (Lab fee required.)

## 23 Human Development

Prerequisite: Psychology 21.
(A student may not receive credit for both Psychology 23 and Education 20.)
Study of the mental, physical, social, and emotional life of the individual throughout the life span. Emphasis on theories of development, developmental processes, and changes that take place in the course of aging. Pertinent research in various aspects of development is reviewed.

## 24 Social Psychology

Prerequisite: Psychology 21.
Study of individual human behavior as it affects and is affected by other people in social interaction. Topics include the self, attitudes, group dynamics, prejudice, interpersonal relationships, impression formation, attribution, aggression, and prosocial behavior. A research project is an important aspect of this course.

## 31 Behavior Disorders

Prerequisites: Psychology 21 plus one other course in psychology.
An introduction to the study of psychopathology. Topics covered include the definition, assessment, and classification of psychopathology; a survey of the types of disorders, their etiologies, symptoms, and treatments.

## 32 Theories of Personality (4)

Prerequisites: Psychology 21 plus two other courses in psychology.
Study of the major theories of personality that have provided the historical groundworlc and perspective for current personality research. Topics include psychoanalytic, trait, cognitive, behavioral, and humanistic theories.

## 33 Learning (4)

Prerequisites: Psychology 21 and 22.
Introduction to the empirical facts and theories of animal and human leaming. Historical perspective provided for the development of experimental approaches to learning. Topics include classical and instrumental conditioning, reinforcement, leaming related to emotion and motivation, generalization, and discrimination. More recent cognitive emphases also considered. A research report is an important aspect of the course.

40 Sensation and Perception (4) Prerequisites: Psychology 21 and 22.
Study of the processes associated with the input and interpretation of sensory information including the anatomy and physiology of the visual, auditory,
olfactory, gustatory and somatosensory systems. Particular emphasis given to the mechanisms by which environmental stimuli are not only detected, but modified by the central nervous system in order to enhance the preception of contrast. Lab projects explore the nature of sensory systems and explanations for perceptual illusions. (Lab fee required.)

## 41 Behavioral Neuroscience (4)

Prerequisites: Psychology 21 and 22 or permission of instructor.
Study of the relationship between the brain and behavior. Topics include motor and sensory systems, neural substrates of learning and memory, sleep and dreaming, and the interplay between physiological and behavioral mechanisms in homeostatic regulation. Lab projects examine the anatomy and physiology of the central nervous system. (Lab fee required.)

42 Animal Behavior (4)
Prerequisites: Psychology 21 and 22 or permission of instructor.
Comparative analyses of behavior among a variety of nonhuman species. Evolutionary theory is emphasized in the study of social behavior, aggression, reproductive and parental behavior, territoriality, predator-prey relationships, and other topics. Lab projects with birds, insects, mammals, fish, and reptiles emphasize the development of adaptive behaviors. (Lab fee required.)

## 43 Assessment (4)

Prerequisites: Psychology 21 and 22 or permission of instructor.
An introduction to the psychometric principles of test construction and test use and to the theories and methods of psychological assessment.

## 44 Memory and Cognition (4)

Prerequisites: Psychology 21 and 22.
Examination of the research and theories of human memory and cognition. Topics include pattern recognition, attention, encoding and retrieval processes, forgetting, knowledge representation, problem-solving, decision-making, and language. Experimental approaches to studying these topics will be discussed. Course requirements include writing a paper.

45 Theories of Psychotherapy (4)
Prerequisites: Psychology 21 plus two other courses in psychology (Psychology 31 and/or 32 preferred). The general theories of psychotherapy, including the psychodynamic, behavioral, cognitive and phenomenological traditions. Differences and commonalities among approaches are emphasized.

47 Applied Social Psychology (4)
Prerequisites: Psychology 21 and 24 or permission of instructor.
A survey of applied research in social psychology, especially in areas such as education, health, and business. Seminar format is used, and a term project is included.

50 History and Systems of Psychology (4) Prerequisites: Psychology 21 and 22 plus four other courses in psychology.
Historical perspective on contemporary psychology. Various approaches to defining and studying psychology are analyzed in a seminar format.

## 83 Internship (4)

Prerequisites: Psychology 21 and 22, one other course in psychology, and permission of supervising psychology faculty.
Provides majors with direct training and experience in professional psychology. Interns complete a minimum of 100 hours ( 4 credits) or 50 hours (2 credits) of on-site activities related to internship objectives, complete a comprehensive paper, participate in scheduled seminar meetings, and have individual meetings with their faculty and on-site supervisors. Must be taken pass/fail and does not count toward the 10-course major in psychology.

## 85 Independent Research (4)

Prerequisites: Psychology 21, 22 and permission of supervising faculty member.
Qualified students engage in independent research under the supervision of a faculty member: conducting original library or laboratory research in the principal areas of psychology. A research paper and an oral presentation are required. May be counted one time toward the 10 -course major.

95 Special Topics in Psychology (4)
Prerequisites: Psychology 21 and permission of instructor.
Topics vary with each offering and are announced in advance for each course. May be counted two times toward the 10 -course major.

## Religion

Professors: Blackwell, Rutledge, Shelley (Chair)
Associate Professors: Pitts, Rogers, Turner Assistant Professors: Britt, Greene, Grieser, Matthews, Stulting, Teipen

Religion 11 or 12 or the Humanities sequence $(11,12,13)$ may be taken to satisfy the General Education requirement. Religion 11 or 12 or Humanities 11 is prerequisite for any other course in the department. A student who
has talten any one of these three options is not permitted to take either of the others. In particular, a student may not take both Religion 11 and Religion 12. A student choosing to talte a second course in religion to satisfy General Education requirements may choose any course numbered 20-56.

## Majors

In keeping with the liberal arts tradition, a major includes studies in Bible, Christian history and thought, religion and culture, world

religions and psychology of religion. The specific courses of the major are agreed upon in conference with the student's department advisor. A major requires a minimum of eight courses and must include Religion 75.

REL is the prefix for religion courses on schedules and transcripts.

11 Introduction to Biblical Literature (4) Study of the Bible to heighten appreciation for its literary origins and forms, historical settings, moral wisdom and religious insights, and enduring contributions to Western culture.

12 Introduction to Religion (4)
Exploration of the nature of religion as manifested in the variety of religious experiences and expressions, including symbols, myths, rituals, and religious literature. The Bible serves as a primary text.

21 History, Literature, and Religion of the Old Testament (4)
Study of the Old Testament in its historical context, with emphases on the forms and contents of its literature and the religion of ancient Israel.

## 22 The New Testament and Early Christianity (4)

Study of the New Testament in the context of the social and historical development of earliest Christianity, emphasizing the nature and variety of the religion of the early Church.

23 Religion and Culture (4)
Critical appreciation from a Christian perspective of basic commitments, characteristic idolatries. and ideal values of U.S. national life. with attention to biblical roots, civil religion, civic virtues, constitutional pluralism, and theological principles for public life.

## 24 Religion in America (4)

Historical survey of belief systems and practices of the religions and civil religion of Americans. Emphasis on the principal denominations and movements within and growing out of Judaism and Christianity. Native American religions, the American form of selected non-Western religions, and larger cult groups studied briefly.

## 29 Basic Christian Theology (4)

Introduction to what the Christian community as a whole has believed, taught, and confessed on the basis of Scripture. The course examines the nature of theology, and its traditional expressions in such topics as the Trinitarian understanding of God, human sinfulness, reconciliation, and servanthood, and God's relation to the world in creation, providence, and eschaton.

30 Old Testament Prophets (4)
Study of the phenomenon of prophecy and the prophets in their historical context, with emphases
on the literary forms of prophetic literature and the social, political, and religious values of the prophets.

31 Wisdom Literature (4)
Study of Proverbs, Job, Ecclesiastes, and other Wisdom writings of the Hebrew Bible and Apocrypha, and their relationship to other literature, ancient and modem. Topics include pain and suffering, the origin and nature of evil in a theocentric world, and the nature of the good life.

32 Jesus and the Gospels (4)
(1) Exploration of early Christian gospels, both canonical and non-canonical, focusing on the distinctive features of each of the four canonical gospels and the relationships among the synoptic gospels. (2) Study of modem quests for the historical Jesus, beginning in the nineteenth century and focusing on contemporary historical research.

33 Paul's Life and Thought (4)
Introduction to the writings and social world of Pauline Christianity. Topics include Paul and "the Jews," his collaboration and conflict with women, and slavery in early Christianity. Includes examination of how Paul's authority is appropriated by later Christian authors, and how the character Paul is portrayed in early Christian fiction.
34 Old Testament Narrative Literature (4) Examination of selected narratives in the Old Testament, with an emphasis on the methods of interpretation used by ancient and modem readers.
A36 Geography and Archaeology of the Biblical World (4)
A travel course to ancient sites of the biblical world and modem centers of Middle East culture, with special attention to archaeological research and discoveries. Conducted with a companion travel course from another department.

38 Women and Religion (4)
Investigation into the roles of women, feminine images, and women's issues in religion, especially in the Christian tradition. Exploration of the methods and thinking of feminist scholars in Bible, ethics, theology, etc. and a discussion of contemporary women's spirituality.
39 Religious Approaches to Meaning (4) Exploration of approaches to life's meaning from skepticism through existential humanism, pragmatic "will to believe," Stoic and biblical Wisdom, Augustinian faith, and Christian self-giving and service.

40 Church History (4)
Study in historical context of determinative periods in the development of the Christian church, with consideration of implications for Christian churches today. Emphasis upon both secondary and primary texts.

A4 1 Buddhism (4)
The doctrines, practices, and communal life of the Buddhist religious tradition, as well as a survey of the origin, development, and expansion of Buddhism in its various cultural forms: Theravada, Mahayana, and Tantric.

A42 Islam (4)
An examination of the origins and development of Islam, the world's second largest religious tradition. Particular attention is given to the formation of Islamic faith and practice as well as contemporary manifestations of Islam in Asia, Africa, and North America.

43 Judaism, Eastern Orthodoxy and Roman Catholicism (4)
Judaism in its four major forms, Eastern Orthodox Christianity, and Roman Catholicism. Consideration of the development, public and private practices, beliefs, and institutions of each tradition. Relationship of these groups to one another and to Protestantism also studied.

A44 African Religions (4)
Introduction to the depth and variety of religious expression in Africa. The course focuses on three types of religion in Africa - Traditional, African Islam, and African Christianity - and explores relations between religious and cultural experience.

A45 Religions of the World (4)
Nature of religion and principal features of living religions. Important ideas and practices of major religions examined in historical and cultural context, with emphasis on the human quest for meaning and integrity.

## 46 Religion and Literature (4)

Interpretation of novels, poems, plays, chiefly modern, with emphasis on religious and moral significance, aiming to illumine our human pilgrimage and moral quests. Recent texts have included worlcs by Tolstoi, Hesse, Sayers, Sartre, Buck, Pirandello, O'Connor, Percy, Endo, and Carver.

47 Christian Classics
Interpretation of texts expressing the devotional tradition of Christian faith, with emphasis on their time, place, and ecclesiastical tradition, as well as the perennial human issues they raise. Recent courses have included worlcs by Tolstoi, Hesse, Sayers, Sartre, Buck, Pirandello, O'Connor, Percy, Endo, and Carver.

48 Christian Thought (4)
Developments in Christian thinlcing through periods of crucial formulation and change, such as the sixteenth-century Reformations or the Enlightenment and early Romanticism. Attention to such issues as interpretation of Scripture and the relation of head and heart in faith.

A49 Hinduism (4)
An exploration of Hindu beliefs and practices with an emphasis on major religious themes that linlc classical traditions with popular piety.

## 50 Church and Society (4)

The relationship, including mutual contributions and tensions, between the Christian church and selected societal elements, such as the institution of the family, the indigent, the state, and politics.

52 Psychology of Religion
Individual and corporate religious experience as means to personal identity. Emphasis on religious assumptions of contemporary psychology; psychology's contribution to understanding religious thinking, feeling, deciding; and the organization of religious life styles.

## 53 Religious Convictions and

 Human Experience (4)Critical exploration of the capacity of various religious perspectives, including those held by the students, to illumine, interpret, and guide human life and work. Seminar meets weeklv durine fall and spring terms, with course credit awarded in spring term. All participants must be engaged in approved field placements. Significant experiences with these field placements as well as common readings, films, case studies, and personal ioumals will provide the essential content of the seminar. Admission by application (Deadline: May 1).

54 Faith and Ethics (4)
Study of human values and conduct in light of the basic affirmations of Christian faith. Topics include the nature of moral reasoning, the use of the Bible in Christian ethics, the relationship between religious faith and moral life, and contemporary ethical problems.

55 The Nature of Ministry (4)
Examination of the biblical and historical background of ministry, areas of contemporary ministry, and personal and social motivation for ministry.

56 Religion and Science (4)
A comparative study of these fundamental interpretative systems, examining historical conflicts (especially Copernican astronomy and evolutionary theory), the nature, methods, and presuppositions of each, and contemporary issues involving both.

## 75 Senior Seminar <br> (4)

80 Directed Independent Study (4)
Prerequisites: agreement with instructor and approval of written prospectus by department chair prior to registration.

[^2]
## Sociology

Professor: Cover<br>Associate Professors: Kooistra, K. McNamara, R. McNamara, Redburn (Chair), Siegel

Sociology 21 and 24 and Anthropology 22 and 23 satisfy the General Education requirement in the social sciences.

## Majors

Majors are required to take Sociology 21, 39, 40,51 and 75.

A major requires a minimum of eight courses. It is advisable for majors to take as many of the following as possible: Computer Science 16, Economics 11, Philosophy 20 and Psychology 21. All majors are encouraged to take the advanced sociology section of the Graduate Record Examination.

SOC and ANT are the prefixes for
sociology and anthropology courses on schedules and transcripts.

## Sociology

## 21 Principles of Sociology (4)

The sociological perspective of human behavior, including an analysis of the human condition and society, culture, personality, the social processes, social institutions and social change.

24 Contemporary Social Problems and Social Change (4)
A $n$ analysis of current social problems and social policies: the definitions and causes of problems as well as the efficacy and feasibility of proposed solutions.

25 Sociology of the Future (4)
Survey of the basic sociological approaches to change and techniques of forecasting the future. Emphasis placed on tensions which may develop between humanistic values and technological innovations.


30 Media, Culture and Society (4)
A $n$ investigation of the relationship between social structure and cultural expressions. Topics include the social basis of lenowledge-mass media and education systems; norms, values and ideologies; and popular culture.

## 31 Marriage and the Family (4)

The institutions of marriage and the family in a historical and cross-cultural perspective. Focus on the rules and meanings that individuals in our society use to understand the nature and workings of these two institutions. The cultural myths about the family, contemporary alternatives and the various processes involved in family formations, lifestyles, child rearing, family violence and divorce.

32 Social Inequality (4)
Prerequisite: Sociology 21 or permission of instructor.
Analysis of social stratification, status and social class. Relationship of social class to social intimacy, style of life, values, mobility and the socialization process. Structure and function of power systems.

## 33 Medicine and Society (4)

Prerequisite: Sociology 21 or permission of instructor.
A $n$ introduction to the sociological study of medicine and the applications of sociology in medicine, emphasizing the sociocultural aspects of health and illness.

34 The Urban Community
Prerequisite: Sociology 21 or permission of instructor.
A study of the dynamics of urbanization; urban ecology, lifestyles and institutions; urban problems; and urban planning.

36 Population and Human Environment
Prerequisite: Sociology 21 or permission of instructor.
Analysis and review of basic population theory and trends, including a detailed study of the effects of demographic components (fertility, mortality and migration) on contemporary human society and the environment.

38 Race and Ethnic Group Relations (4) Prerequisite: Sociology 21 or Anthropology 23 or permission of instructor.
Racial, ethnic and religious minorities in America and around the world. "Race" and social identities; stigmatization and prejudice; intergroup cooperation, collusion and competition.

39 Methods of Social Research (4)
Prerequisite: Sociology 21 or permission of instructor.
Introduction to the basic techniques of sociological research. Stages of research project development considered: hypothesis formulation; methods of
proof; data collection; attitude scaling; the research report. Individual research proposals are developed that can be completed in the seminar (Sociology 75).

40 Analysis of Social Data
(4)

Prerequisite: Sociology 21 or permission of instructor.
Introduction to basic techniques of statistical description and inference, with an emphasis upon the application of statistics.

## 41 Social Gerontology (4)

Social and personal problems associated with aging and retirement. The place of the aged in American society. Changes in the structure and functioning of society necessitated by increasing proportions of the aged in the population.

## 42 Sociology of Gender (4)

Prerequisite: Sociology 21 or permission of instructor.
Analysis of the role of gender in society. Exploration of the ways gender differences are culturally reproduced transforming male and female biology into masculinity and femininity. Historical cross-cultural examples are examined as well as a discussion of the nature/nurture debate.
Consideration of the influence of the family, media and language. Additional attention to the role of gender in the social institution (e.g., education, work, health care).

44 Law and Society (4)
Prerequisite: Sociology 21 or Political Science 21.
Using a cross-cultural perspective, an examination of how laws are made, how they are implemented, and what effect they have on people's lives. An introduction to the fundamental problems encountered in the administration of the United States criminal justice system.

45 Social and Political Movements (4) Origin, maintenance and operation of American social movement organizations and political interest groups. Civil rights, environmental, occupational health, and activist student groups examined in detail. Special emphasis on strategies to acquire political access, influence governmental policy, and theoretical criteria for assessing movement success.

47 Criminology and Delinquency (4) Prerequisite: Sociology 21 or permission of instructor.
A basic introduction to the field of criminology: the criminological enterprise; measuring criminal behavior; victims and criminals - profiles; theories of crime causation - biological,psychological, and sociological; crime typologies - violent, property, corporate, political and public order. Briefly discussed: cops, courts, and corrections.

48 Social Deviation and Social Control (4) Prerequisite: Sociology 21 or permission of instructor.
Consideration of both individual and group conformity and deviation. Analysis of the theories of deviance; its forms, e.g., crime, delinquency, sexual deviation, drug dependence; and the mechanisms of social control. The interaction process within which deviance and control evolve.

50 Sociology of Religion (4)
Prerequisite: Sociology 21 or Anthropology 23 or permission of instructor.
Examines religion's role in social cohesion and conflict, in continuity and change. A central focus is contemporary American religious life and its mix of seemingly contradictory trends.

## 51 Sociological Theory <br> (4)

Prerequisite: Sociology 21 or permission of instructor.
Philosophical and historical influences on and contemporary orientations in sociological theory. The sociological approach to knowledge is compared to that of the other sciences and the humanities.

## 52 Contemporary Social Theory (4)

Prerequisite: Sociology 21 or permission of instructor.
Overview of contemporary social theory from 1920 to the present. Examination of these problems associated with the growth of formal and technological rationality in modem society. Authors to be read include Alan Wolfe, Thomas Kuhn, Herbert Marcuse, Max Weber, and Michael Harrington.

## 75 Sociology Seminar (4)

Prerequisite: majors in advanced standing who have completed Sociology 39 and 40.
Students may complete the research proposal developed in Sociology 39 or undertake a new project. The seminar ends with a colloquium in which student research findings are summarized.

## 80 Independent Study (4)

Prerequisite: Consent of instructor.
Prospectus for study must be presented to instructor and approved in the term preceding registration for the course.

83 Internship in Sociology (4)
Prerequisites: Sociology 21 or 24 ; one upper level course in Sociology; a minimum 2.8 GPA in one's major; or permission of instructor.
This course provides advanced students with practical experience in a variety of local social service agencies. Interns complete a minimum of 120 hours of on-site activities relating to their
internship objectives, participate in scheduled seminar meetings, workshops, and field research exercises, and meet regularly with internship director and agency supervisor. Students cannot talce this course pass/fail and it does not count toward the eight-course major in Sociology.

95 Special Topics in Sociology

## Anthropology

## 22 Human Antiquity (4)

An introduction to physical anthropology and archaeology. Topics include primate and human evolution, "race" and the realities of human physical variation, the peopling of the world, and the origins of food production and complex societies.

23 Societies and Cultures (4)
An introduction to social and cultural anthropology. Topics include the comparative study of subsistence regimes and economics, stratification and political organization, marriage and kinship, culture and personality, religion, and social and cultural change.

## 26 Peoples of Latin America (4)

Survey of contemporary issues in the social and cultural anthropology of Latin America (and the Caribbean), including ethnicity and race, family and gender, and political economy and environment.

A27 Peoples of Black Africa (4)
A social and anthropological survey of the diversity of peoples in sub-Saharan Africa. Examining rural and urban social life before, during, and after colonial life.

A28 Cultures of the Non-Western World (4) Ethnographic survey of African, Asian, Middle Eastern, and Latin American societies. Focuses on ecological adaptation, politics, and sociocultural change and male-female relations.

35 Issues in Anthropological Thought History of theory and practice in social and cultural anthropology from the "armchair evolutionists" of the late 19 th century to the symbolic and interpretive anthropologists of the late 20th century.

46 Culture and Personality (4)
Prerequisite: Sociology 21 or Anthropology 23 or permission of instructor.
Human universals and sociocultural differences: socialization and enculturation theories; culture, society and the "self."

## Theatre Arts

Professors: Bryson, Cummins (Chair)<br>Assistant Professors: Gossman, Oney

Theatre Arts 11 satisfies the General Education requirement in fine arts. Theatre Arts 34 or 35 meets the General Education requirement for a course numbered 20 or above in the humanities (see page 50). Theatre Arts 11 is normally prerequisite to all other Theatre Arts courses.

All majors in Theatre Arts must complete six terms of Theatre Arts 01 (participation in the production work of the department) and complete Theatre Arts 20, 21, 25, 26, 28, 31, $34,35,40,42$ and 75.

Majors wishing to pursue a career in teaching must complete Theatre Arts 60, Computer Science 16 and Education 11/01, $20,21,50 / 02,167$ and 171 in addition to the prescribed courses in the major. The requirements for licensure (teaching internship) will be completed on a post-baccalaureate, graduate credit basis, with the student becoming eligible for licensure at the end of fall term following graduation. Refer to the Teacher Education section beginning on page 81 for specific requirements for admission to the Teacher Education program and other pertinent information.

THA is the prefix for theatre courses on schedules and transcripts.

01 Theatre Practicum (0)
Significant participation in the department's theatre production as determined by the faculty, including, but not limited to, serving as a cast member, in stage management, as a crew head or as an assistant to a designer.

## 11 Introduction to Theatre (4)

Script analysis, dramatic structure, production styles, introductory overview of acting, directing, design and technical elements of production. Participation in some phase of play production (backstage or onstage) or a creative project is part of the course.

## 12 Malceup (2)

Prerequisite: Theatre Arts 11 or permission of instructor.
Principles of makeup design for the theatre based upon play reading and script analysis. Techniques of application limited to the painterly approach and beginning three-dimensional techniques. Compilation of a resource file of graphic images provides the basis for design choices.

13 Sound Design (2)
Study of the history of theatre sound design and production. Introduction to sound recording, digital sound capturing and editing, microphones and sound reinforcement techniques. Students complete design projects related to theatrical production.

## 20 Acting (4)

Fundamentals of acting technique including script reading and analysis, movement, vocal development, and performance theory and practice.

21 Digital Technology for the Theatre (4) Introduction to hardware and software technologies used in theatrical production, study, research and analysis. Students produce projects directly related to theatre scholarship, design and practice in such areas as graphics, database, audio and video production and editing, html and web publishing, page layout, and design. Lab required.

## 25 Stagecraft (4)

Technical theatre nomenclature, tools and materials, rigging, scene painting and standard construction techniques for standard scenery. Lab required.

## 26 Costume Crafts <br> (4)

Prerequisite: Theatre Arts 11 or permission of instructor.
Principles of costume technology, including basic sewing/construction techniques, fabric identification and modification technique, and crafts techniques such as millinery armor construction, and dyeing and painting. Lab required.

28 Lighting Design and Practice (4) Prerequisite: Theatre Arts 25 or permission of instructor.
Introduction to the history and practice of theatrical lighting design, including basic electricity, instruments, control, analysis, research and execution of design projects. Lighting lab required.

## 31 Directing (4)

Prerequisite: Theatre Arts 20 or permission of instructor.
Introduction to modem directing theory and strategies, including script analysis, casting and rehearsal techniques, and direction of a one-act play for public performance.

## 34 History of the Theatre I: Ancient Theatre to 1700 (4)

A survey of classical Greek and Roman theatre, the beginnings of eastern theatre, the theatre of medieval Europe, Renaissance Italy, France and Japan, Golden Age Spain, Elizabethan and Restoration England, and Baroque France.

## 35 History of the Theatre II: Eighteenth

 Century to the Present (4)A survey of theatre history from the end of neoclassicism through German romanticism and on through realism. Includes elements of twentiethcentury eclecticism such as epic theatre, the theatre of the absurd, and the theatres of participation, confrontation, protest and ritual.

## 40 Scene Design

(4)

Prerequisite: Theatre Arts 25 or permission of instructor.
Exploration of theatrical perspective drawing techniques. Analysis, research and execution of selected scenic design projects. Completion of Art 21 and 23 helpful, but not required.

## 42 Costume Design (4)

Prerequisite: Theatre Arts 11 or permission of instructor.
The costume design process, from elements and principles of design to analysis of script and character, historical research, and methods of rendering.

## 45 Acting II: Characterization <br> (4)

Prerequisite: Theatre Arts 20 or permission of instructor.
Advanced acting techniques with emphasis on exploration and development of character through play reading and analysis, improvisation, ensemble acting, experimentation and performance.

## 50 Theatrical Criticism (4)

Prerequisite: Theatre Arts 11, 34 and 35, or permission of instructor.
Analysis and discussion of major trends in theatrical criticism from Aristotle to the present.

## 60 Creative Dramatics for the Classroom

 Teacher: An Introduction to Children's Theatre (4)Practical games, exercises and improvisations for actors and teachers who wish to work in the children's theatre field or use creative dramatics in the non-theatre arts classroom. Includes creative dramatics and drama structures for the non-theatre classroom.

75 Seminar: Senior Synthesis
Prerequisite: Senior level status as a major and approval of the faculty.
The opportunity to research a special topic, solve a production problem, examine a critical theory or complete a creative project as a synthesis of the major course of study.

80 Independent Study: Advanced Directing Project (4)
Direction of a full-length play in the laboratory theatre season. Offered only after production proposal has been approved by drama faculty.

80 Independent Study: Advanced Design
Project (4)
Research and design of scenery, lighting or costumes for a major production. Preparation of all applicable renderings, working drawings and plans. Supervision of execution of the designs. Offered only on approval by the scenic or costume designer.

## 80 Independent Study

(4)

Independent projects not specifically related to directing or design. Projects may be approved in, although not necessarily limited to, acting, theory and criticism, theatre history or playwriting.


## Urban Studies

Director: Halva-Neubauer

## Majors

From the following list of courses a student can arrange an interdisciplinary major in urban studies. Seven core courses are required of every major. The student chooses an additional four, allowing leeway to emphasize a specific disciplinal area or take full advantage of the major's interdisciplinary content. The quantitative techniques requirement can be met by taking Economics 25, Mathematics 30, Political Science 14, or Sociology 40.

For course descriptions, see listings under individual departments.

US is the prefix for urban studies courses on schedules and transcripts.

Computer Science 16 Introduction to Computing (4)

Economics 11 Introduction to Economics (4)
(Core course)
Economics 50 Labor Economics (4)
Economics 34 Urban Economics (4)
(Core course)
Economics 38 Public Finance (4)
Political Science 11 Introduction to American Government (4)
(Core course)
Political Science 22 Judicial Process and the U.S. Supreme Court (4)

Political Science 23 Civil Rights and the
U.S. Constitution

Political Science 24 Public Policy and Administration (4)

Political Science 25 State Politics (4)
Political Science 26 Urban Politics (4)
(Core course)
Political Science 27 Interest Groups and Political Movements (4)

Political Science 28 Racial and Ethnic Politics (4)

Political Science 85 Fieldwork in State and Local Public Affairs (4)

Sociology 21 Principles of Sociology (4) (Core course)

Sociology 25 Sociology of the Future (4)
Sociology 32 Social Inequality (4)
Sociology 34 The Urban Community (4)
(Core course)
Sociology 36 Population and Human
Environment (4)
Sociology 38 Race and Ethnic Group
Relations (4)
Sociology 40 Analysis of Social Data (or Political Science 14 or Economics 25 or Math 30) (4)
(Core course)
Sociology 47 Criminology and
Delinquency (4)
Sociology 48 Social Deviation and Social Control (4)

Urban Studies 82 Independent Study (4)
Guided research normally focused on urban development.

## Graduate Studies



Furman University offers graduate work leading to degrees in two fields. The Master of Arts degree is offered by the Department of Education and the Department of Health and Exercise Science, and the Master of Science degree is offered by the Department of Chemistry.

All courses offered for the master's degree are organized in the Graduate Division under the supervision of the Graduate Council. The Director of Graduate Studies serves as chair of the Graduate Council.

Post-Baccalaureate Courses Required for Licensure of Furman Graduates

All programs for teaching licensure, except music education and physical education, must be completed on a postbaccalaureate basis. Following graduation from Furman with a four-year baccalaureate degree in the major, completion of Education 167 (Inquiry and Research in the Classroom) and the teaching internship (Education 171) will occur on the graduate level during the fifth year. In most cases, graduate hours accrued during the fifth year may be applied toward a master's degree. For more information, see pages 81-85.

## Master of Arts

## Admission

The Master of Arts program offered through Furman is designed primarily for certified teachers. Within this program, a concentration is also offered in health and exercise science through the Department of Health and Exercise Science. Students following the health and exercise science concentration who do not plan to teach are encouraged to have an undergraduate major or minor in physical education or exercise science. These students may be
required to take prerequisite courses in fitness and wellness concepts, exercise physiology, and anatomy to ensure a broad understanding of health, exercise, physical education or exercise science.
To qualify for graduate study in education, students must have earned a bachelor's degree from a college or university accredited by a regional accrediting association or approved by the South Carolina Department of Education and must have completed a minimum of 12 hours in professionaleducation courses. Applicants should confer with their assigned advisor to plan their programs.
Students seeking admission to the graduate program in education who are certified to teach or who intend to certify should submit to the Office of Graduate Studies (1)an application accompanied by a nonrefundable $\$ 25$ application fee, (2) an official transcript (mailed from each college attended), and (3) score from the Graduate Record Examination. Students seeking initial certification in education may be required to take courses that do not apply toward the master's degree.

Applicants for the master's degree must submit two recommendations completed on forms provided by the Office of Graduate Studies. Once students are admitted to the master's degree program and their program of study is planned with an advisor, they are considered degree candidates since there is no conditional or probationary status.

Students pursuing the concentration in health and exercise science should submit to the Office of Graduate Studies (1) an application from the Department of Health and Exercise Science accompanied by a nonrefundable $\$ 25$ application fee, (2) an official transcript (mailed from each college attended), (3) three recommendations completed on the department's recommendation form, (4) a resume, and (5) the Graduate Record Examination
score. Each applicant must be interviewed by the department chair.

## Transient Students

Students studying for a degree at another institution must be eligible to return to that institution when registering for graduate courses at Furman. They should submit the graduate application to the Office of Graduate Studies accompanied by a one-time, nonrefundable application fee. In addition, they should present, prior to registration, a statement from the institution to which graduate credits are to be transferred indicating that the student is in good standing and that the course(s) will transfer.

## Transfer Credit

Not more than six to eight hours of graduate credit verified by an official transcript may be transferred from another institution. Graduate credit is not given for correspondence work or for portfolios of professional experience.

Graduate credit is not transferred for a grade below $B$ unless the college or university granting the credit recognizes the grade for graduate credit.

## Degree Requirements

1. Admission. See above.
2. Course Work. Students must complete an approved program of study with an

overall $B$ average and no more than two grades of C. (See Academic Status below.) Included in each program is a prescribed core. (See Program of Study below.) The department offering the concentration reserves the right to make appropriate substitutes for the required core courses and to designate other courses to complete any individual program of study.

Many concentrations in the graduate education program of study correspond to South Carolina certification requirements. Students wishing to certify in a new area should consult the South Carolina Department of Education, Office of Education Professions/Certification and Licensure for information on course requirements and on requirements for the National Teacher Examination or the South Carolina Teaching Area Examination.

Individuals seeking certification in another state should consult the Department of Education in that state, as certification requirements may differ.
3. Academic Status. Student records are reviewed each term, after which students malting a C or lower are notified of their current academic status. Graduate credit will not be given for grades below C (2.0). Anyone who does not have a B average (3.0) or who has a grade of $\mathrm{C}(2.0)$ on more than two courses will not be allowed to continue in the master's degree program. A student who makes a D or an F on a graduate course will be ineligible to complete the master's program.
4. Time Limitation. All work for the master's degree, including transferred credit, must be completed within a period of six years.
5. Capstone Course. Starting in the Fall Term of 2000, candidates for the Master of Arts degree in education
will enroll in Education 199: Master's Seminar in Education as the final course in the degree program. Students completing the Master of Arts program in education between Fall Term 1999 and Summer Session 2000 may elect to take either the comprehensive examination or Education 199 as scheduled.
6. Comprehensive Examination. A written, comprehensive exit examination is required of each student enrolled in the Health and Exercise Science concentration. The candidate must either have completed all course work or be in the last course(s), preferably elective, when taking the examination. The comprehensive is scheduled three times each year (February, May and late summer).

## Program of Study

Master of Arts. In the program of study for the Master of Arts degree, each student is required to select a concentration. The concentration is offered in early childhood education, elementary education, language arts/reading, school leadership, special education (learning disabilities, emotional handicaps, mental retardation), health and exercise science, and in secondary education through academic departments participating in the master's program, such as English and history.

Workshops, special topics courses and courses in the Year Round Scholars Program may or may not be approved as electives for particular programs of study. Furthermore, not all courses talten for recertification may be applied to the master's degree.

Additional information on programs of study, course descriptions and prerequisites is available from the Office of Graduate Studies.

## Courses of Study - Education

100 The Learning Process
101 Statistics and Measurement in Education (3)

102 Research in Education (3)
105 Advanced Research in Education (3)
106 Historical and Contemporary Perspectives on Schooling in America (3)

107 Administration in the Elementary School (3)

108 Administration in the Middle School (3)
109 Administration in the Secondary School (3)

110 Introduction to Educational Administration and Leadership (3)

111 Curriculum Development for School Leaders (3)

112 Supervision of Instruction (3)
114 School Finance and Business
Management (3)
116 Public School Administration with Finance (3)

117 School Law (3)
118 School Personnel Administration (3)
119 Group Dynamics (3)
120 Advanced Human Growth and Development (3)

121 Introduction to Educating Exceptional Individuals (3)

122 Nature of Learning Disabilities (2,3)
123 Nature of Emotional/Behavioral Disorders (2, 3)

124 Nature of Mental Retardation
125 Nature and Needs of the Gifted and Talented (3)

126 Patterns of Development, Birth to Age Eight (3)

127 Language Acquisition and Development, Birth to Age Eight (3)

128 Diagnosis and Remediation of Disabling Conditions, Birth to Age Eight

130 The Principalship: Leadership for Effective Schools (3)

131 Educating Individuals with Diverse Learning Needs (3)

132 Procedures for Educating Individuals with Learning Disabilities (3)

133 Procedures for Educating Individuals with Emotional/Behavioral Disorders (3)

134 Procedures for Educating Individuals with Moderate/Severe Disabilities (3)

135 Procedures for Educating Individuals with Mild Mental Retardation (3)

136 Strategies and Techniques for Teaching the Gifted and Talented (3)

137 Teaching Science in the Elementary School (3)

138 Children's Literature (3)
139 Teaching Social Studies in the Elementary School (3)

141 Teaching Writing in Grades 6-12
142 Adapted Language Arts and Social Studies Instruction for Students with Disabilities (3)

143 Adapted Math and Science Instruction for Students with Disabilities (3)

144 Reading and Writing in the Elementary School (3)

146 Teaching Reading in Content Areas (3)
148 Current Trends in Reading and Writing

149 Assessment and Instruction in the Language Arts Classroom (3)

150 Educational Assessment (3)
151 Contemporary Trends in Teaching (3)
152 Selection of Instructional Materials for the Elementary School (3)

153 Selection of Instructional Materials for the Secondary School (3)

156 Introduction to Technology in Education (3)

157 Introduction to Computer Technology in Education (3)

158 Application of Computer Technology to the Instructional Program (3)

160 Behavior of the Young Child (3)
161 Methods and Materials for Teaching the Young Child (3)

162 Curriculum Design for the Young Child (3)

163 School Program Evaluation (3)
164 Planning in Educational Administration (3)

165 Planning and Using Educational Spaces (3)

166 Organization and Administration of Guidance and Pupil Personnel Services (3)

167 Inquiry and Research in the Classroom (3)

168 Readings in School Administration (3)
169 Advanced Seminar in School Administration (3)

170 Supervision of Student Teaching (3)
171 Teaching Internship (9)
172 Practicum in Special Education: Learning Disabilities (3)

173 Practicum in Special Education: Emotional / Behavioral Disorders (3)

174 Practicum in Special Education: Mental Retardation (3)

176 Practicum in Teaching the Gifted and Talented (3)

177 Practicum in Teaching the Young Child (3)

178 Practicum in School Administration (3)
178E Internship in Elementary School Administration (3)

178M Internship in Middle School
Administration (3)
178 S Internship in Secondary School
Administration (3)
179 Practicum in Language Arts/Reading
180-189 Workshops in Education
With prior approval from an advisor, students may enroll in a maximum of three worlcshops ( 9 hours) in a master's program, but may enroll in additional worlcshops for recertification.

181 Elementary Teachers Worlcshop

(1-6)

182 Administrative Skills Worlcshop (1-4)
185 Children's Boolcs - Authors in Person (3)

186 Using the Newspaper in Middle and High School (3)

187 Teacher Effectiveness Training (3)
195 Special Topics in Graduate Education (3) Includes topics of current interest to educators. Topics vary.

199 Master's Seminar in Education (3)

## Courses of Study - <br> Health and Exercise Science

100 Advanced Physiology of Exercise (3)
101 Current Issues and Trends in Health and Exercise Science (3)

102 Principles of Fitness Evaluation
103 Research in Health and Exercise Science (3)

104 Applied Statistics (3)
105 Wellness Behaviors (3)
106 Exercise Psychology (3)
107 Physical Education, Athletics, and the Law (3)

108 Fitness Programming (3)
110 Sport Psychology (3)
113 Coaching and Conditioning Principles (3)
114 Scientific Principles of Aerobic Conditioning (3)

115 Exercise in Health and Disease (3)
116 Curriculum Development in Physical Education (3)

117 Diagnostic Techniques of Sports Medicine (3)

195 Special Topics in Health and Exercise Science (3)

## Master of Science in Chemistry

The Department of Chemistry provides the opportunity for B.S. candidates to continue their study to the master's level. The M.S. curriculum is part of a five-year program in which the student may be granted the B.S. after four years. The student may receive graduate credit for certain 40-level courses taken during the fourth year but must successfully complete the B.S. program before formal admission as a regular graduate student, normally at the beginning of the fifth year.

All M.S. degree candidates must present a thesis based on approved research.

The purpose of this program is to extend to the master's level the broad introductory curriculum which constitutes the B.S. requirements and to involve undergraduates earlier and more extensively in research. At the graduate level, formal courses are lcept to a minimum. The emphases are on the research experience and the development of facility with current literature, to prepare students for participation in doctoral programs.

Although the program has been organized primarily to be of benefit to B.S. candidates at Furman, students from other colleges will be considered for admission.

Admission

1. Admission to Graduate-Leuel Courses.

A senior enrolled in the B.S. program at Furman may elect to enroll in certain 40 -level courses that may be counted for graduate credit when later admitted to the graduate school. The student must present to the department the necessary credentials to qualify for a quality graduate program. Students not enrolled in the B.S. program at Furman must present acceptable undergraduate credentials before they can enroll in the 40-level courses.
2. Admission to Graduate Division. Furman seniors may apply to the Director of

Graduate Studies for admission to the Graduate Division upon successful completion of the B.S. program.
Favorable recommendation will be contingent upon:
a. Satisfactory performance in Chemistry $41,42,44$ or 47 taken during the senior year and in research (Chemistry 85).
b. Satisfactory scores on the advanced and aptitude sections of the Graduate Record Examination. Students with B.S. degrees from other schools or Furman seniors who have not qualified as described above may apply for admission to the Graduate Division by presenting acceptable undergraduate programs and satisfactory scores on the Graduate Record Examination.

Upon admission to the Graduate Division the student shall be assigned to a graduate committee which will approve a course of study, research problem and thesis. This committee will include (as chair) the staff member who will direct the student's research problem and one additional staff member appointed by the department chair.
3. Admission to Candidacy for the M.S.

Degree. The departmental committee will recommend that the student be admitted to candidacy for the M.S. degree at the end of the first term as a regular graduate student, based on:
a. Satisfactory performance in all course work.
b. Satisfactory progress on a research problem.
c. Satisfactory completion of undergraduate review examinations and the cumulative examination series.
After meeting these requirements, a student should file for candidacy in the Office of the Director of Graduate Studies at least by the beginning of the term in which the thesis will be completed. A
student who, in the opinion of the faculty, is not making satisfactory progress toward candidacy may be asked to terminate graduate studies.

## Degree Requirements

1. Admission to Candidacy.
2. Courses. Students must complete two 40-level courses selected from Chemistry $41,42,44$ or 47,175 (counts as two courses), 180, 185 (may count as more than one course) and 190.
3. Grades. Students must have an overall $B$ average on all graduate work for the master's degree.
4. Research and Thesis. Students must register for Chemistry 185. Registration for Chemistry 190 must be made for the term preceding graduation. Credit for these courses is given upon approval of thesis and its defense.
5. Examinations. Students are required to show satisfactory performance in the following examination program:
a. Undergraduate Review Examinations. At the beginning of fall term and the end of spring term, there will be examinations in analytical chemistry, inorganic chemistry, organic chemistry, physical chemistry and biochemistry.
b. Cumulative Examinations. These examinations are given monthly during the academic year and are based upon departmental seminars and literature readings. Students must pass only a limited number of these examinations but must take all examinations during a given year until the requirements are satisfied.
c. Final Examination. The candidate must pass an oral examination consisting of a defense of thesis.
d. Special Examinations. Special examinations may be required of any candidate who fails to give a satisfactory overall performance in the
graduate program. The requirement is to be specified by the student's graduate committee and the chair of the department. The student is to be informed of the nature and reasons for the examination and to be given adequate time to prepare.
6. Seminars. All graduate students are required to participate in the departmental seminar and literature reading program. Students will formally register for two terms of Chemistry 175. However, they are expected to continue to participate in the seminar program until the cumulative examination requirement is completed.
7. Residence Requirements. A minimum residence of one academic year of graduate study is required. All work for the M.S. degree must be completed within a period of six calendar years.

Courses of Study
Chemistry 41 Quantum Chemistry (4)
Chemistry 42 Advanced Structure and Chemical Reactivity (4)

Chemistry 44 Advanced Biological
Chemistry
Chemistry 47 Environmental Chemistry
Chemistry 175 Graduate Seminar in
Chemistry (4)
(Counts as two courses.)
Chemistry 180 Special Topics in Chemistry
Chemistry 185 Research (4)
(Counts as two courses.)
Chemistry 190 Thesis (4)
All courses are required of all students for the M.S. degree. Students have options in their study based upon their selection of a research problem. Furthermore, Chemistry 180, Special Topics in Chemistry, is designed as a tutorial course to meet the special needs of individual students.

## General Information



## Medals and Awards

Furman University Scholarship Cup. Donated by Hales Jewelers. Awarded to the senior with at least 63 credit hours at Furman who maltes the highest academic average. Won in 1998 by Tracy Alison Steen.

Bradshaw-Feaster Medal for General Excellence. Endowed by the late Dr. S. E. Bradshaw in continuation of the medal provided by the late W. L. Feaster of the class of 1913. Awarded by the faculty to a senior man on the bases of scholarship, general culture, participation in college activities, Christian character. Won in 1998 by Derek O'Neal Bruff.
Donaldson-Watkins Medal for General Excellence. Given by the late Mrs. Elizabeth Wilson Donaldson and the late Mrs. Maude Wakefield Watkins, members of the class of 1889 . Awarded by the faculty to a senior woman on the bases of scholarship, general culture, participation in college activities, Christian character. Won in 1998 by Zabrina Breezeleaf Aleguire.

President's Award. Awarded by a committee of faculty, administrators and students to seniors for qualities of scholarship, leadership, service, and participation in college and community activities. Won in 1998 by Kathryn Boyce Ingram, Caroline Laurent Simpson, and Orlando Bernarda Ruff.
American Legion Medal. Awarded by the American Legion, Department of South Carolina, to a senior man and a senior woman for qualities of honor, courage, scholarship, leadership and character. Won in 1998 by James Randall Johnson and Leslie Michele Milner.
AlfredS. Reid Award. Certificate awarded by the Furman chapter of Omicron Delta Kappa to the man in each class who has made the best all-around contribution to the improvement of the university and student life during the year. Won in 1998
by Benjamin Arnold Barnhill and Lance James DiLorio (seniors), Hans Anthony Bechtel (junior),Richard Benjamin Broolts and Tyler Stephen Thigpen (sophomores), and Edward Allen Cothran (freshman).

Winston Babb Memorial Award. Plaque awarded by the Furman chapter of Omicron Delta Kappa to the woman in each class who has demonstrated the most outstanding qualities of leadership, scholarship and service to the university. Won in 1998 by MaryAnn Whalen (senior), Stacy Allyson Schorr (junior), Deborah Colvin Wells (sophomore), and Jessica Cook Roberts (freshman).

Thomas E. Flowers Award in Art. Won in 1998 by Kimberly Ann Pavlik.

Glen E. Howerton Award in Art. Won in 1998 by Susan Elaine Watson.

Art Faculty Award for Leadership and Exceptional Service. Not awarded in 1998.

Distinguished Research A ward in Biology. Won in 1998 by Shannon Lynn Dover and Christopher Scott Lassiter.

Elizabeth Thackston Taylor Botany Medal. Established by the late R. L. Taylor, Jr., of the class of 1931 in memory of his mother. Awarded by the biology faculty to the student with the greatest interest and aptitude in field study of plants of the Piedmont. No student is eligible a second time. Won in 1998 by Stephanie Lee Hitchcock.
Beta Chi General Excellence Award. Annual monetary award to a junior or senior biology major for outstanding academic achievement and unselfish service. Won in 1998 by Shaza Aladien Fadel.

Paul Lewis Fisher Book Award. Annual monetary gift for book purchase to one or more deserving biology students. Won in 1998 by Daniell Elizabeth Farrier.

Nora Mullens Biology Award. Medal presented to a freshman for outstanding work in the course Foundations of Biology. Won in 1998 by Emily Anne Steinweg and Joseph Armstrong Wineman II.

John Sampey Award in Chemistry. Cash award to an exceptional graduating chemistry major, based on meritorious scholarship, strength of character and promise of a productive scientific career. Won in 1998 by Robert Michael Hirsch.

John Albert Southern Award in Chemistry. Won in 1998 by Ann Marie Weiss. American Chemical Society Outstanding Senior Award. A year's membership in the American Chemical Society (ACS) by the Western Carolinas Section of ACS, awarded to the senior member of the student chapter with the best record in chemistry. Won in 1998 by Katherine Leigh Burns.

Freshman Chemistry Award. Lange Handbook of Chemistry presented by the student affiliate chapter of the American Chemical Society to the outstanding student or students in freshman chemistry. Won in 1998 by James Michael Bartz.

The American Institute of Chemists Award. Won in 1998 by Joseph Michael Espinosa and Shane Gregory Roller.

Analytical Chemistry Award. Won in 1998 by Hans Anthony Bechtel.

Award for Achievement in Organic Chemistry. Won in 1998 by Ginger Michelle Denison.
J. S. Murray Greek and Latin Prizes. Two prizes, one in Greek and one in Latin, established by the late Dr. John Scott Murray. Greek Prize won in 1998 by Matthew Alben Miller. Latin Prize won in 1998 by Leslie Michelle Coates.

Chinese Award. Won in 1998 by Shannon Forida Smoak.

Montaigne Award in French. Won in 1998 by Leigh Elizabeth Allen and Sara Nicole Koenig.

Goethe Award in German. Won in 1998
by Kirk Willingham Neely.
Japanese Award. Won in 1998 by Howard Cheng-Hao Wu.

Cervantes Award in Spanish. Won in 1998 by Sonia Diane Asrani.

Computer Science Faculty Award. Won in 1998 by Derek O'Neal Bruff and Sara Nicole Koenig.

Furman Theatre Award for Distinguished Achievement. Awarded annually to the student who has contributed most significantly to the theatre program over a four-year period. Not awarded in 1998.

Wallace C. Fallow OutstandingSenior Award in Earth and EnvironmentalSciences. Won in 1998 by David Carroll Shelley.

Wall Street Journal Medal and Award. A medal and year's subscription to the Wall StreetJournal, awarded for outstanding work in economics and business administration. Won in 1998 by Randall Wyatt Drury.

Elliott Davis and Company Accounting Award. Won in 1998 by Amy Marie Strickland.
J. Carlyle Ellett Economics Prize. Won in 1998 by Anthony Lynn Walsh.

Gilpatrick Award for Scholarly Writing.
Won in 1998 by Andrea Christina Bobotis.
L. D. Johnson Award in Creative Writing. Won in 1998 by Mark Christopher Canavera and Meggin Cie Stailey.

Margaret Beattie Courtenay Poetry Prize. Won in 1998 by Andrea Christina Bobotis.

Meta Eppler Gilpatrick Fiction Prize. Not awarded in 1998.

Thomas Award in Health and Exercise Science. Awarded by the staff of the Department of Health and Exercise Science to a graduating major who has shown unusual professional growth, interest and service, and who exemplifies the desired characteristics of a physical educator. Won in 1998 by Regan Louise Bagnell.

Endel Memorial History Medal. Founded by the late Mrs. H. Endel as a memorial to her husband and awarded to the man doing the best work in history. No student is eligible a second time. Won in 1998 by Kirk Willingham Neely.

Gilpatrick History Prize. A cash prize, given by Choice McCoin of the class of 1957 as a memorial to DelbertH. Gilpatriclt, professor of history emeritus, and Meta E. Gilpatrick, professor of English emeritus, and awarded to a woman for outstanding work in history. No student is eligible a second time. Won in 1998 by Anna McLaurin Lynn Austin.

Behethland Butler Chapter, D.A.R., Prize in American History. Jefferson Cup awarded annually to the best student in American history in the graduating class. Won in 1998 by Sally Ryan Burgess.

DeLany Medal in Mathematics. A gold medal given by William J. DeLany of the class of 1942 to the student malting the highest grade average in advanced

mathematics. Won in 1998 by Robeson Summersgill McGary.

DuPre Rhame Award. Won in 1998 by Mark Robert Kemp.

Dan A. Ellis Award. Presented to the outstanding freshman band member by the Furman Band and Iota chapter of Kappa Alpha Order in honor of Dan A. Ellis. Won in 1998 by James Stephen Wingard.

Jake Rasor Award. Won in 1998 by Mark Alexander Sossoman.

Sigma Alpha Iota Scholastic Award. Won in 1998 by Laura Beth Scholz.

Sigma Alpha Iota College Honor Award. Won in 1998 by Lee Meredith Stone.

Phi Mu Alpha Lockhart Music Award. Won in 1998 by Kevin David Stokes.

Phi M u Alpha Goldsmith Music Award. Won in 1998 by Wendy Marie Bennis.

Vince Perone Outstanding Bandsman Award. Won in 1998 by Melissa Ann Faulkner.

Ulmer Political Science Medal. Founded by S. S. Ulmer and awarded to an outstanding student in political science. No student is eligible a second time. Won in 1998 by Vincentas Vobolevieius.

Henry P. Jones Political Science Medal. Awarded to an outstanding political science major in the memory of Henry P. Jones, a Furman graduate who became an outstanding political science professor. Won in 1998 by Baxter Chad Ewing and Lance James DiLorio.

Political Science Faculty Senior Honors Essay Prize. Won in 1998 by Jessica Andrea Morris.

Physics Faculty Awmd. Awarded by the faculty in the Physics Department to the outstanding student(s) in Physics 11 and Physics 12. Won in 1998 by Jeffrey M. Jordan for Physics 11; Dana A. Schwartz for Physics 12.

Robert Emmett Allen Premedical Prize. Established by Kat Macy Ladd. Awarded to a senior judged outstanding in charac-
ter and accomplishment in premedical education. Won in 1998 by Brent Thomas Steadman.

Alpha Epsilon Delta Scholarship Award. Presented annually to a premedical student on the bases of scholarship, financial need and contribution to Alpha Epsilon Delta, the honorary premedical fraternity. Won in 1998 by Heather Gamett MacNew.

Allport Scholar in Psychology. Given by Robert J. Maxwell, Jr., to the senior psychology major best representing the integration of psychology and other disciplines. Won in 1998 by Tracy Alison Steen.

Burts Scholar in Psychology. Established by Charles W. Burts. Awarded to the outstanding psychology major. Won in 1998 by MaryAnn Whalen.

Marshall Prevost Psychology Medal. Awarded to an outstanding student in psychology. Endowed by Dr. Gerda P. McCahan, class of 1941, in memory of her father, Marshall Prevost. Won in 1998 by Marisa Lynn Manzi and Jennifer Marie Turner.

Baggott Ministerial Award. Endowed by the Rev. and Mrs. James L. Baggott. Annual award in cash or books and medallion to the outstanding graduating ministerial student, based on Christian dedication, leadership, academic record and promise of outstanding service as minister and preacher. Won in 1998 by Justin Morgan Harvey.

Endel Medal in Debate. Won in 1998 by Cindy D. Simmons.

Endel Medal in Speech. Won in 1998 by Laura Lee Jonas.

Baggott Excellence Awards. Endowed by the Rev. and Mrs. James L. Baggott. Annual awards of a medallion and cash to a senior man and woman on the basis of academic achievement and Christian character and for being an outstanding volunteer in church-related vocations.

Won in 1998 by Ginger Ann Thomas and Jeffrey Todd Chambers.

Scholarly Achievement Award in Religion. Won in 1998 by Briana Catherine Greene.

## Meritorious Teaching Award

The Alester G. Furman, Jr., and Janie Earle Furman Award for Meritorious Teaching. Through the benefaction of the late Mr. Alester G. Furman, Jr., and Mrs. Furman, an annual cash award for meritorious teaching is made to the member or members of the faculty judged to have been most effective in undergraduate teaching during the current academic session. Any member of the faculty who has taught one or more courses during the session is eligible.

Recipients are selected by an unannounced selection committee, composed of faculty and students, appointed annually by the president. The selection is announced at spring cornmencement.

In considering prospective recipients, the selection committee places primary emphasis upon the following aspects of teaching: the inspiration of students toward an enthusiastic interest in an academic discipline and in learning in general, evidence of professional competence in the teacher's field, and interest in the academic and personal welfare of students, both within and outside the classroom.

Nominations for the award with supporting information may be submitted in writing in sealed envelopes by faculty or students to the Vice President for Academic Affairs by April 15 each year.

The Meritorious Teaching Award was won in 1998 by Theodore Lloyd Benson, Associate Professor of History, and David Wells Morgan, Associate Professor of French.

Meritorious Advising Award
The Alester G. Furman, Jr., and Janie Earle Furman Award for Meritorious Advising. This annual award, made possible by an additional gift from the Furman family, recognizes a member of the faculty who, in the opinion of students, other faculty, and alumni, is an exceptional academic advisor.

Recipients are selected by an unannounced student/faculty committee on the basis of written nominations sent to the Vice President for Academic Affairs by April 15 of each year. The factors considered by the selection committee are each nominee's long-term commitment to advising, rapport with students, concern for advisees' career goals and future plans, willingness to seek answers to advisees' questions, ltnowledge of university regulations and curriculum, and effectiveness in directing students toward productive college experiences.

In 1998, the Meritorious Advising Award was won by Robert David Roe, Professor of Economics and Business Administration.

Chiles-Harrill Award
The Chiles-Harrill Award, provided through the benefaction of Mr. Frank Keener of the Class of 1964, is an annual cash award to a member of the faculty or administrative staff considered to have made substantial contributions to the lives of students. The award honors Marguerite Moore Chiles, former vice president for student services, and Ernest E. Harrill, professor emeritus of political science and former dean of students. Recipients are selected by an unannounced committee composed of faculty, staff and students.

In 1998, the Chiles-Harrill Award was won by Betty Jean Alverson, director of the University Center.

| Enrollment Information 1998-99 |  | Missouri | 17 |
| :---: | :---: | :---: | :---: |
| Summer 1998 | Total | Montana | 2 |
| First Term | 535 | Nebraska | 2 |
| Second Term | 548 | New Hampshire | 2 |
|  |  | New Jersey | 33 |
| Regular Session |  | New Mexico | 2 |
| Fall Term 1998 |  | New York | 28 |
| Seniors | 623 | North Carolina | 214 |
| Juniors | 568 | Ohio | 44 |
| Sophomores | 723 | Oklahoma | 4 |
| Freshmen | 717 | Oregon | 3 |
| Graduates | 230 | Pennsylvania | 50 |
| Specials | 12 | Rhode Island | 5 |
|  | 2,873 | South Carolina | 1061 |
| Undergraduate Evening Studies |  | South Dakota | 2 |
| Fall Semester 1998 | 246 | Tennessee | 212 |
|  |  | Texas | 35 |
|  |  | Utah | 2 |
| Enrollment by States or Countries |  | Vermont | 2 |
| of Residence |  | Virginia | 56 |
|  |  | Washington | 1 |
| Alabama | 54 | West Virginia | 13 |
| Arizona | 2 | Wisconsin | 2 |
| Arkansas | 2 | Wyoming | 1 |
| California | 10 | Argentina | 2 |
| Colorado | 3 | Australia | 1 |
| Connecticut | 26 | Bermuda | 1 |
| Delaware | 2 | Bulgaria | 4 |
| District of Columbia | 1 | Canada | 2 |
| Florida | 272 | Colombia | 1 |
| Georgia | 502 | Estonia | 1 |
| Hawaii | 1 | Great Britain | 1 |
| Idaho | 1 | Honduras | 1 |
| Illinois | 18 | Hungary | 1 |
| Indiana | 11 | India | 1 |
| Iowa | 2 | Japan | 3 |
| Kansas | 1 | Korea | 2 |
| Kentucky | 52 | Mexico | 1 |
| Louisiana | 11 | Norway | 1 |
| Maine | 6 | Russia | 1 |
| Maryland | 34 | Slovakia | 1 |
| Massachusetts | 12 | Switzerland | 1 |
| Michigan | 11 | Yugoslovia | 1 |
| Minnesota | 6 |  | 2,873 |
| Mississippi | 13 |  |  |

## Degrees Conferred

May 30, 1998

## Bachelor of Arts

Adam Paris Abney, Chattanooga, Tenn. Carrie Ann Ackerman, Armonk, N.Y.
Stephen Fulton Adelaar, Richmond, Va.
Robert Brandon Aebersold, summa cum laude, Marietta, Ga.
Paul Morrell Aiesi ${ }^{i}$, magna cum laude, Greenville, S.C.
Stephanie Nicole Akins, Tampa, Fla.
Zabrina Breezeleaf Aleguire, magna cum laude, Fair Play, S.C.
Leigh Elizabeth Allen, magna cum laude, Lugoff, S.C.
Sarah Scott Allgyer, Lake Forest, Ill.
Terry Allen Alston, Greenville, S.C.
Hallie Elizabeth Anderson, Franklin, Tenn.
Laura Elaine Angel, Montgomery, Ala.
Anna McLaurin Lynn Austini, summa cum laude, Nairobi, Kenya
Stewart Caudill Austin, Chattanooga, Tenn.
Meredeth Grace Babb, Orangeburg,S.C.
Jonathan Alan Babcock, Knoxville, Tenn.
Shannon Quincy Barber, Atlanta, Ga.
Jennifer Sunflower Barlow, magna cum laude, Atlanta, Ga.
Benjamin Arnold Barnhill, cum laude, Columbia, S.C.
Laurie Elizabeth Battle, magna cum laude, Oak Ridge, Tenn.
Stephanie Lynn Beard, Louisville, Ky.
Arch Leonard Bell, Midland, Texas
Elizabeth Holland Bell, Mount Airy, N.C.
Seddrick Charron Bell, Augusta, Ga.
Janet Katharine Belliveau, Scituate, Mass.
Kirsten Christine Bender, Simpsonville,S.C.
Mindy Leigh Benton ${ }^{\text {l }}$, Charlotte, N.C.
Jayda Denise Biddix, magna cum laude, Kings Mountain, N.C.
Elizabeth Ann Bielefeld, Columbia, Md.
Matthew Harrison Black, Marietta, Ga.
Charles Dameron Blackwell II, cum laude, Reidsville, N.C.
Elizabeth Arent Blasi, Atlanta, Ga.
Mary Beth Blaskowitz, Camden, S.C.
Melissa Marie Blocker, cum laude, Tampa, Fla.
Sarah Grace Bloomquist, Greenville, S.C.
Kathryn Hollister Bloxdorf, Easley, S.C.
Andrea Christina Bobotis, magna cum laude, Greenville, S.C.
Nicole Alison Bolte ${ }^{1}$, magna cum laude, Chambersburg, Pa .
Heather Blair Booth, Mableton, Ga.
Christyne Katherine Bourne', cum laude, Lexington, Ky.
Dean Smith Brannen, Savannah, Ga.
Brian Christopher Bridges, cum laude, Greenville, S.C.

William Ronald Broneill, Manchester, Conn.
Ryan Martin Brooks, Cleveland, Tenn.
Michelle Foley Browder, cum laude,
Winston-Salem, N.C.
Bradley Omar Brown, Marietta, Ga.
Melisa Leigh Brown, Union, S.C.
Peter Evan Brown, Columbia, S.C.
Tara Marie Brunelle, Southampton, Mass.
Kyle David Bumgardner, Gastonia, N.C.
Sally Ryan Burgess, magna cum laude, Greenville, S.C.
Peyton Suzanne Burke, Piedmont, S.C.
David Andrew Burns, New Canaan, Conn.
Tanya Lynn Bussom, cum laude, Millersville, Md.
James Landrum Butler, Birmingham, Ala.
William Evans Butterworth, Bristol, Tenn.
Deborah Alane Cantrell, Travelers Rest, S.C.
Keith Richard Carson, Mission Viejo, Calif.
Carri Ann Carver, magna cum laude, Hampton, Ga.
Susan Martin Caudell, Atlanta, Ga.
Jeffrey Todd Chambers, magna cum laude, St. Clairsville, Ohio
Kate ElizabethChambless, Greenville, S.C.
Jennifer Dea Chase, Memphis, Tenn.
William Dwight Childree, Marietta, Ga.
Julie Anne Childress, Richmond, Va.
Stephen Livingston Childress, Atlanta, Ga.
Christopher Michael Ciapciak, St. Louis, Mo.
Catherine Suzanne Claire, summa cum laude, Melbourne, Fla.
Jayne Susan Clamp, Tampa, Fla.
Scott Taylor Clanton, Atlanta, Ga.
Helen Elizabeth Clark, Vidalia, Ga.
Joseph Helvenston Clayton, Orlando, Fla.
Ann Elizabeth Clinton, Marietta, Ga.
Christina Alis Cochran, Gainesville, Ga.
Charles Burton Colson, Greenville, N.C.
JasonLeslie Combs, cum laude, Panama City, Fla.
Jennifer Madeline Connor, Knoxville, Tenn.
Reginald Patrick Corley ${ }^{1}$, Lexington, S.C.
Christopher Michael Covert, Clearwater, Fla.
William Gerald Cox, Jr.', Atlanta, Ga.
Aaron David Crane, Greenville, S.C.
Amy Leigh Crist, Atlanta, Ga.
Brian James Cross, Longwood, Fla.
Brian Douglas Cueny, Gainesville, Fla.
Jennifer Lee Culbreth, Spartanburg, S.C.
Bryan Scott Dailer, Orlando, Fla.
Brett Christopher Damadio, Medford, N.J.
Addison Albright Dana, Atlanta, Ga.
Michael Christopher Davidson, Atlanta, Ga.
Bradley Shane Davis, Greenville, S.C.
Michael Jamaine Davis, Manning, S.C.
Rosalie Grace Dayrit, Goose Creek, S.C.

Tonya Michelle Derringer, Douglasville, Ga. Lance James DiLorio', summa cum lattde, Memphis, Tenn.
Tinh Tinh Do, cum laude, Vemon, Conn. Audrey Elizabeth Dodson ${ }^{1}$, cum laztde, Virginia Beach, Va.
Courtney Anne Dodson, Clearwater, Fla. Matthew Wayne Dority, cum lattde, Jefferson City, Tenn.
Jefferson Elliott Douglas, Atlantis, Fla.
Randall Wyatt Drury ${ }^{1}$, magna cum laude, Richboro, Pa.
Michael Andrew Duclcwall, Cincinnati, Ohio
Amy Catherine Dunagan, magna catm lattde, Cornelia, Ga.
Michael James Duncan, cum laude, Piclcens, S.C.
Kenneth Michael Dwyer, Fort Walton Beach, Fla.
Chad Thomas Dyar, Anderson, S.C.
Laura D'Ann Dyes, Tucker, Ga.
Matthew Adrian Eades, Louisville, Ky.
Merideth Easom, cum laude, Athens, Ga.
Jill Elizabeth Edwards, Fort Mill, S.C.
Kellie Renee Edwards, Greenville, S.C.
Jennifer Ann Einhom, cztm laude, Newnan, Ga.
Ross Taylor Eldridge, Greenville, S.C.
Sally Jones Eubanks, Charlotte, N.C.
Leslie Rhea Evans, Germantown, Tenn.
Stephanie Kristine Everett, Marietta, Ga.
Baxter Chad Ewing', magna cum Iaude, Hartsville, S.C.
Mollie Kathleen Fagan, Lake Forrest, 111.
Kirsten Lynette Feil, magna cum laude, Hummelstown, Pa.
Jeffrey Lehman Fitzgerald, Mount Pleasant, S.C.
Christina Flynn ${ }^{1}$, magna cum laude, Spartanburg, S.C.

Christian LeeAnn Foree ${ }^{1}$, Athens, Tenn.
Matthew Robert Foreman, magna cum laude, Stone Mountain, Ga.
Alex Christopher Forrest, Lawrenceville, Ga.
Amanda Elizabeth Fortner, Logan, W.Va.
Jennifer Leigh Foulk, Marietta, Ga.
Christina Lynn Franks, Plano, Texas
Susan Scott Fraser, Tallahassee, Fla.
David Brendan Frazer, cum laude, Atlanta, Ga.
Matthew Alan Fritz, La Center, Ky.
James Nathan Galbreath, cum laude, Fort Thomas, Ky.
Courtney Allison Garner, Orlando, Fla.
Richard Bartlett Garrett, Jr., Montgomery, Ala.
Kevin Patrick Garrison, Albemarle, N.C.
Darryl J. Gausten, Charlotte, N.C.
David Eugene Gibson, Dalton, Ga.
Thomas Harold Gilbert, Bostwick, Ga.
Jaime Carol Gilkerson, Oak Hill, W.Va.
Thomas Michael Goila, Cincinnati, Ohio
Josh Lomonte Gore, Lake Jackson, Texas
Stacy Jean Gray, cum laude, Bethel Park, Pa.
Briana Catherine Greene, inagna cum laude, Thomaston, Ga.
Marie Louise Griscom, Winter Haven, Fla.
Lisa Marie Guerra, Little Rock, Ark.

Jennifer Meredith Guthrie, cum laude, Greenville, S.C.
Melissa LeeAnn Haack, Simpsonville, S.C.
Katrina Ann Hankinson, Oneonta, Ala.
Jennifer Hanna, Gibsonia, Pa.
Jamie Edna Harris, cum laude, Greenwood, S.C.
Richard Joseph Harris, Nashville, Tenn.
Michael Preston Harrison, magna cum Iaude, Conyers, Ga.
Justin Morgan Harvey ${ }^{1}$, Bolingbroke, Ga.
Jack Rocha Hayes', magna cztm laztde, Dillon, S.C.
Kimberly Faye Heckman, Columbia, S.C.
Amy Kalloch Henderson', Savannah, Ga.
Robin Leigh Henderson, Gainesville, Fla.
Paige Elizabeth Henson, Acworth, Ga.
Allein Patton Hickman, Memphis, Tenn.
Timothy Grayson Hill, Huntsville, Ala.
Joshua E. Holmes, San Francisco, Calif.
John Austin Hood, cum laude, Dunwoody, Ga.
John Andrew Howard, Conyers, Ga.
Seth Daniel Howard, Harlan, Ky.
Julie Anna Hudson, Greenville, S.C.
Robyn Diane Hunter, Kansas City, Kan.
Robert Benjamin Hutchens II, Statesville, N.C.
Amy Elizabeth Hutchison, Cincinnati, Ohio
Katherine Boyce Ingram', Apopka, Fla.
Samuel Martin Inman IV, Greenville, S.C.
Kanako Inouchi, Kobe, Japan
Rastislav Ivanic, magna cum laude, Spisska Nova Ves, Slovak Republic
Todd William Jackson, Locust Grove, Ga.
John Joseph Jacobs II, Dunwoody, Ga.
Arica Lee James, Harlem, Ga.
Sherrie Laverne Jeffries', Jonesville, S.C.
Lindsey Anne Jenkins, Birmingham, Ala.
Tara Michelle Jemiclc, Shelter Island, N.Y.
David Dwight Johnson, Burlington, N.C.
James Randall Johnson ${ }^{2,3}$, inagna cum laude, Mobile, Ala.
Travis Duane Johnson, magna cum laude, Spartanburg, S.C.
Angel Elizabeth Jolly, Greenville, S.C.
James Christopher Jonas, Hoover, Ala.
Laura Lee Jonas, Birmingham, Ala.
Carrie Elizabeth Jones, Fenton, Mich.
Selena Tennell Jones, Greenville, S.C.
William Wade Joye, cum laztde, Columbia, S.C.
Benjamin James Kaye, Norcross, Ga.
Melinda Beth Keefauver, Spartanburg, S.C.
Scott Michael Keefauver, Fairplay, Md.
Jennifer Noelle Kerley, Greer, S.C.
Lindsay Rebecca King, Marietta, Ga.
Matthew Scott King, Clinton, S.C.
Katherine Duncan Kirill, Jacksonville, Fla.
Victoria Ruth Kitlco, Baltimore, Md.
Sara Nicole Koenig, summa cum laude, Charleston, S.C.
Bradley Botsch Lakamp, Terrace Park, Ohio
Amy Gould Lang ${ }^{1}$, cum laude, Franklin, Tenn.
Steven Matthew LaSota, Orlando, Fla.

Collie William Lehn, Jr., cum Inude, Clinton, S.C.
Jason Adam Lerner, Tallahassee, Fla.
John Charles Leslie, magna cum laude, Jaclcson,Tenn.
David Gregg Lewis, magna cum laude, Plantation, Fla.
Erica Magnani Lewis, Grecnville, S.C.
George Edward Linney III, Charlotte, N.C.
Daniel Edward Livengood, Marietta, S.C.
Jennifer Anne Long, Tucker, Ga.
Susan Rebecca Looper, Easley, S.C.
John Louis Lund, Farmville, Va.
David Nelson Lyon, Rock Hill, S.C.
Karlene Marie Machovec, Spartanburg, S.C.
Amanda Claire MacKee, Tallahassee, Fla.
Rachel Little MacNabb, Newnan, Ga.
Daniel John Martz, Allison Park, Pa.
Haley Renee Mathews, Hendersonville, N.C.
Jonathon Richard McAdow, Anderson, S.C.
Elizabeth Erin McCarthy, Tampa, Fla.
Jefferson Joseph McGehee, Atmore, Ala.
Terence Stephen McGraw, Kettering, Ohio
Jason Reid McMillin, Columbia, S.C.
Josephine Reel McMullen, cum Inude, Greenville, S.C.
James Edward McRae, cum laude, Nashville, Tenn
Brady Francis Meeks, Castle Rock, Colo.
Margaret Allison Meyer, Cincinnati, Ohio
Christopher Jacob Miller, Kingwood, Texas
Russell Fant Miller, Greenville, S.C.
Leslie Michele Milner', magna cum laude, Greenville, S.C.
Jonathan Tate Mlinarcik, Clare, Mich.
Marlc William Moore, Clearwater, Fla.
Andrew Burke Moorman, cum laude, Louisville, Ky.
Allison Victoria Morgan, Asheville, N.C.
Jessica Andrea Morris, cum laztde, Lilbum, Ga.
Thomas Scott Mowbray, Dacusville, S.C.
Jeffrey Allan Muehlhauser, Chicago, Ill.
Melanie Rand Muller, Piclcens, S.C.
Brenda Lee Munger, Piclcens, S.C.
Shannon Jehanne Leonette Munson', magna cum laude, Miami, Fla.
Linda Anne Murphy, Garden City, N.Y.
Joshua Lane Myers, Charleston, S.C.
Teresa Marie Neal, Winter Haven, Fla.
Mary Scott Nelson, Clarkston, Ga.
Brian Christopher Nick, Greenville, S.C.
Jennifer Helen Nissen, Florence, S.C.
Fred Jefferson Noblin, Tallahassee, Fla.
Elizabeth Paige Noethling, Roswell, Ga.
Mark Russell Normington, Brecksville, Ohio
Jonathan Andrew Oalces, Chattanooga, Tenn.
Virginia Lee O’Brien, Louisville, Ky.
Dana Michelle Olsen, cum laude, Greenville, S.C.
Mary Palmer Owens, cum laude, Atlanta, Ga.
Courtney Elaine Page, Holliston, Mass.
Michal Bonnilyn Parker, Greenville, S.C.
Joel Peter Patton, Travelers Rest, S.C.
Kimberly Ann Pavlik, cum laztde, Gainesville, Fla.
Martha Allison Peck, Mount Sterling, Ky.

Blace Hartigan Peeper, Orlando, Fla.
Matthew John Peterman, Lexington, Ky.
Elizabeth-Ashley Phillips, Lalceland, Fla.
Kenneth Scott Phillips, magna cum laude, Jacksonville, Fla.
Sandra Lynn Phillips, Greenville, S.C.
Kathryn Anne Pierce', Greenville, S.C.
Margaret Louise Pierson, Raleigh, N.C.
Stacey Lorraine Pitek, Wyclcoff, N.J.
Jon Paul Placko, Myrtle Beach, S.C.
Lyndi Kathryn Plant, Tallahassee, Fla.
Casey Jean Price, Florence, S.C.
Jacquelyn Swann Priclcett, cum laude, Eustis, Fla.
William Montgomery Priestley, Sewanee, Tenn.
Linton Baldwin Puclcett, Jr., Greenville, S.C.
Gordon Page Quinby, Richmond, Va.
Marisa Kathryn Ramos, Greenville, S.C.
Kim Suzanne Ray, Easley, S.C.
Bennett James Reaves IV, Lake Charles, La.
Trenence Michael Reece, Boone, N.C.
Anne Caroline Reeves', Gainesville, Fla.
Abigail Leigh Reynolds, Nashville, Tenn.
Steven Seth Rhine, Snellville, Ga.
Mary Katherine Richardson, Eufaula, Ala.
Caroline Mary Riddle, Queens Garden, Hong Kong
Jayson Christopher Riddle, cum laude, Old Fort, N.C.
Mary Grace Robbins, magna cum laude, Greenville, S.C.
James Philip Roe, cum laztde, Travelers Rest, S.C.
Ashley Layne Rogers, Greenville, S.C.
Cameron Borders Ross, Tampa, Fla.
Robert Brantley Rushing, Savannah, Ga.
Kerri Lynne Saller, Melbourne, Fla.
Peter Edward Santora, Atlanta, Ga.
Richard Borden Sasnett III, Augusta, Ga.
Karon Ansel Sasser ${ }^{1}$, Montgomery, Ala.
Matthew Wesley Schivera, Savannah, Ga.
Laura Beth Scholz, magna cum laude, Florence, S.C.
Bemard Scott II, St. Augustine, Fla.
Kerrie Lynn Seltenheim, Old Tappan, N.].
Andrew John Severson, Palm Beach, Fla.
Janet Michelle Shaw, Roclcy Face, Ga.
Christopher Cullen Sheppard ${ }^{2}$, Americus, Ga.
Todd Michael Shirley, Tupelo, Miss.
Traci Michelle Shortridge, cum laude, Daphne, Ala.
Stefanie DeAnne Shute, Fort Mill, S.C.
Caroline Laurent Simpson', Birmingham, Ala.
Suzanne Marie Sloan, Woodruff, S.C.
Kimber Marie Small, Knoxville, Tenn.
Kinsey Marie Smith, Jacksonville, Fla.
Jeremy Matthew Snyder, cum laude, Columbus, Ga.
Anne Williams Stanford, Greenville, S.C.
Stephen William Stark, Gastonia, N.C.
Katherine Sterling St. Clair, Avondale Estates, Ga.
Julia Denise Stephens, cum laude, Piclcens, S.C.
Beatta Ann Stevens, Cartersville, Ga.
Tammera Stewart, Meridian, Miss.
Trevor Weeks Still, Lancaster, S.C.
Edward Albert Storey III, Winter Park, Fla.
Meggan Bess Sullivan, Lakeland, Fla.

Dorothy Marie Swann ${ }^{1}$, Arden, N.C.
Bradley Micah Swillinger, Cincinnati, Ohio
Kelly Ann Sydney, cum laude, Stone Mountain, Ga.
Beverley Adele Wells Taylor,
Montreal, Quebec, Canada
Heather Dawn Taylor, Rock Hill, S.C.
Melissa Jordan Thames, Alpharetta, Ga.
Ginger Ann Thomas, cum laude, Tallahassee, Fla.
Reid Evan Thompson, New Providence, N.J.
Heather Carrigan Thornton, Denton, Texas
Sarah Elizabeth Towles, Denvood, Md.
David Wayne Troyer, Sarasota, Fla. Eugenia Sydnor Turrentine, Spartanburg, S.C.
Altana H. Vande Weghe, Simpsonville,S.C.
Virginia Tabb VanSkiver, Jackson, Miss.
Robin Diane Vaught, Longs, S.C.
Autumn Leigh Veazey, Tifton, Ga.
Charles Edward Vincent, Jr., Durham, N.C.
Vincentas Vobolevicius, summa cum laude,
Kalinas, Lithuania
Jody Carl Wade, Waycross, Ga.
Elizabeth Ann Wadsworth, Pittsburgh, Pa.
Kimberly Anne Walker, Hilton Head Island, S.C.
Anthony Lynn Walsh, cum laude, Pickens, S.C.
Philip Andrew Warren, Tampa, Fla.
Charlie Jared Washam, Franklin, Tenn.
Frederick Ryan Constantine Watkins ${ }^{2,3}$, Dedham, Mass.
Susan Elaine Watson, Chattanooga, Tenn.
Kimberly Renae Welchel, Spartanburg, S.C.
Mahaley Bumett White, Spartanburg, S.C.
Fred Charles Whitmire III, Lookout Mountain, Ga.
Christine Marie Williams ${ }^{1}$, magna cum laude, Dacula, Ga.
Tiffany Adele Williams, magna cum laude, Greenville, S.C.
Amy Suzanne Wilson, Greensboro, N.C.
Charles Kemmons Wilson III, Memphis, Tenn.
Anthony Jacob Winter, Memphis, Tenn.
Ashlyn Elizabeth Wise, Orangeburg, S.C.
Heather Ann Wise, cum laude, Roswell, Ga.
Laura Ashley Wise, Aiken, S.C.
Im-Yan Wong, Columbia, S.C.
Angela Jayne Wood, Barnwell, S.C.
Michelle Leigh Wright, cum laude, Louisville, Ky.
Howard Cheng-Hao Wu, Kaohsiung, Taiwan
Todd Alan Yochim, Louisville, Ky.
Jeffrey Davis Youngs, Woodbridge, Va.

## Bachelor of General Studies

Louise Solomons Anthony, Taylors, S.C.
Kelly Farrow Bishop, Greenville, S.C.
Robert L. Blanton, Jr., Lyman, S.C.
Ronald K. Brewer, cum la de, Greenville, S.C.
Joy S. Fought, Spartanburg, S.C.
Stephen Richard Harris, Greenville, S.C.
Leigh Hedden, Liberty, S.C.
Laurie Anne Southall Jackson, Chattanooga, Tenn.
Frederick G. Johnson, Greer, S.C.
Miriam Amick Kirkpatrick, cum laude, Greenville, S.C.

Angela Denise Littlejohn, Greenville, S.C.
Hollis R. Yearwood, Simpsonville,S.C.
Bachelor of Music
Robert Brian Dailey, Spartanburg, S.C.
JaNelle Cortney Dial, Charlotte, N.C.
Charles Anthony Dillard, cum laude, Waterloo, S.C.
Regenald Rayschawn Garrett, Laurens, S.C.
Camille Sams Gibson, Farmville, Va.
Otis Mills Goodlett IV1, cum laude, Lexington, S.C.
Heather Joy Hatfield Greer, Greenville, S.C.
Michael Thomas Hix, Ozark, Ala.
John Andrew Howard, Conyers, Ga.
Robert Tyler Kelley, cum laude, Annandale, Va.
Mark Robert Kemp, Augusta, Ga.
John Charles Leslie, magna cum laude, Jackson, Tenn.
Michael Patrick Oubre, Sumter, S.C.
Paul Frederick Robbins, magna cum lade, Jackson, Tenn.
Adam Richard Scheuch, Greeneville, Tenn.
Mark Alexander Sossoman, Morganton, N.C.
Lee Meredith Stone', Conyers, Ga.
Ryan Trent Thompson, Greenville, S.C.
Megan Jean Vittum, Greenville, S.C.
Joseph Ryan Westberry ${ }^{1}$, Flowery Branch, Ga.

## Bachelor of Science

Amy Elizabeth Anderson, Knoxville, Tenn.
David Scott Anderson, cum laude, Louisville, Ky.
Jennifer Marie Atkinson, Snellville, Ga.
Timothy Michael Aucoin, cum laude, Norcross, Ga.
Mary Kate Augustine ${ }^{1}$, cum laude, Columbia, S.C.
Holly Sue Aure', cum laude, Austin, Texas
Jennifer Michele Azbell ${ }^{1,5}$, Palm Harbor, Fla.
Regan Louise Bagnell ${ }^{1}$, summa cum laude, Johnson City, Tenn.
Stephanie Lynn Beard, Louisville, Ky.
Matthew Louis Bettini, Clifton, Va.
Mark Douglas Bledsoe, cum laude, Houston, Texas
Angela Townsend Booth, Conway, S.C.
Melissa Leah Borthwick, Jonesborough,Tenn.
Derek O'Neal Bruff, magna cum laude, Lexington, S.C.
Karen Marie Buckmiller, Ramsey, N.J.
Karen Elizabeth Bullock', cum laude, Winter Haven, Fla.
Katherine Leigh Burns ${ }^{4}$, magna cum laude, Columbia, S.C.
Kristen Ashley Bums, Cornelius, N.C.
Tanya Lynn Bussom, cum laude, Millersville, Md.
Angela Marie Cantrell, Greenville, S.C.
Michael Alan Carnahan ${ }^{5}$, magna cum laude, Asheville, N.C.
Carri Ann Carver, magna cum laude, Hampton, Ga.
Rhya Champion, cum laude, York, S.C.
Amy Elizabeth Clapprood, Wales, Mass.

Gregory Alan Clepper, Augusta, Ga.
Mary Katherine Cobb', Birmingham, Ala.
Jennifer Marie Cox, Charleston, S.C.
Kerilt Denton Cox, inagna cum laztde, Travelers Rest, S.C.
Kerry Michele Cronin', Jacltsonville, Fla.
Evelynn Chambers Dallas, cztm laztde, Greenville, S.C.
Virginia Almy Danforth, Winston-Salem, N.C.
Leroy Olvfemi Davies-Venn', Decatur, Ga.
Courtney Brooke Davis, Columbia, S.C.
Stephanie Leigh Davis, czim laude, Kingsport, Tenn.
Julie DeCarlo, Fort Myers, Fla.
Lindsey Sue DeLange, Lockport, N.Y.
Alyson Leigh Dickson, magna cztm laztde, Cowpens, S.C.
Michael Steven Dooley, Toccoa, Ga.
Shannon Lynn Dover, Travelers Rest, S.C.
Thomas Slade Dozier', magna cum laude, Greenwood, S.C.
Joseph Michael Espinosa ${ }^{1,5}$, magna czim laude, Swansea, S.C.
Ryan Newton Essex, magna ctim laztde, Greenville, S.C.
Shaza Aladien Fadel, cum laude, Augusta, Ga.
George Ray Feasters, Chester, S.C.
Kenneth Edward Fields ${ }^{i}$, Johnson City, Tenn.
Samuel Prater Forry ${ }^{\ddagger}$, cztm Inztde, Atlanta, Ga.
Christopher David Fortner ${ }^{2}$, Round O, S.C.
Kristin Leigh Hahn, cttm laztde, Columbia, S.C.
Julie Jeanette Hammett', Inman, S.C.
Alison St. Clair Hanners, Brooks, Ga.
Erika Lyn Harper, czim laude, Ormond Beach, Fla.
John Patrick Harper III, Summerville, S.C.
Jamie Edna Harrisi', cztm laude, Greenwood, S.C.
Jamila Tanica Mosi Harrison, Marietta, Ga.
Paul Jason Heider, Tampa, Fla.
Lucy Amanda Helms, Quincy, Fla.
Amy Elizabeth Henderson, czim laude, Sugar Hill, Ga.
Tanya LaShawn Hinton, Chester, S.C.
Robert Michael Hirsch', summa cum laztde, Collierville, Tenn.
Stephanie Lee Hitchcock, Kingsport, Tenn.
Amanda Kaye Hoffman', magna cttm loude, Eden Prairie, Minn.
Valerie Joy Horsley, magna czim lazide, Lawrenceville, Ga.
Karen Elizabeth Jackson', cum laude, West Palm Beach, Fla.
Kevin Reynard Jacltson, Daytona Beach, Fla.
Margaret Elizabeth Jacltson, Tennille, Ga.
Edward Myungwhan Jhee, Marietta, Ga.
Joseph Lee Johnson, Kingsport, Tern.
Roshan Michael Kallivayalil, Jacksonville, Fla.
Anne Elizabeth Kelly, Greenville, S.C.
Jonathan David Kelly, cztm laztde, Winston-Salem, N.C.
Victoria Ruth Kitko, Baltimore, Md.
Anne Rebecca Klein' ${ }^{1}$, Hartville, Ohio
Jeremy Tate Koch ${ }^{\text {bit }}$, Southbury, Conn.
Sara Nicole Koenig, summa ctim laude, Charleston, S.C.

James Aaron Kraus ${ }^{\dagger}$, magna cztm lazide, Greenville, S.C.
Jennifer Lynn Kudelko, Seminole, Fla.
Andrew Lam ${ }^{5}$, Danbury, Conn.
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'Distinguished Military Graduate
'American Chemical Society Certified
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## Master of Arts

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## Master of Science

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Doctor of Laws
James C. Self, Greenwood, S.C
Doctor of Literature
Bennie Lee Sinclair, Cleveland, S.C.

## Doctor of Humanities

Alice Hollingsworth Magill, Greenville, S.C.

## Degrees Conferred

August 14, 1998

## Bachelor of Arts

Emily Ann Babb, Greenville, S.C.
Christopher Harold Barrier, Morganton, M.C.
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LeRoy Butler, New Zion, S.C.
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Corey Patrick Creighton, North Smithfield, R.I.
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James Benton Salmon, Ledgewood, N.J.
Barry Russell Wilson, Bozeman, Mont.

## Bachelor of General Studies

Glenn Dale Gaines, Jr., Greenville, S.C.
Belinda Beauchamp Taylor, Greenville, S.C.

## Bachelor of Science

Daniel Figueroa Batista, Greenville, S.C. Andrew Harold Fowler, magna cum laude, Florence, S.C.
Derek Damon Nimmons, Charlotte, N.C.

## Master of Arts

Kerry Roberson Baggett, Greenville, S.C. Jon Martin Baldree, Easley, S.C.
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## Degrees Conferred

September 16, 1998
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Charles Lee Brewer (1967) ${ }^{2}$, William R. Kenan, Jr., Professor of Psychology, B.A., Hendrix College; M.Ed., M.A., Ph.D., University of Arkansas.
Mark Ewart Britt (1995), Assistant Professor of Music, B.M.E., Appalachian State University; M.M., Northwestern University; Ph.D., Florida State University.
Samuel Irving Britt (1992), Assistant Professor of Religion, B.A., Furman University; M.Div., southeastern Baptist Theological Seminary; Th.M., Harvard Divinity School; Ph.D., University of Virginia.
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Christina Anne Buckley (1998), Assistant Professor of Modern Languages, B.A., College of William and Mary; M.A., Ph.D., Tulane University.

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Forgione Professor of Philosophy, B.A., North Texas State University; B.D., Southwestern Baptist Theological Seminary; Ph.D., Boston University. Michael Peter Busteed (1998), Captain, Assistant Professor of Military Science, B.S., Spring Hill College.

Anthony Caterisano (1984), Associate
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Robert Edward Chance (1988), Associate Professor of Art, B.F.A., University of Hawaii; M.F.A., Virginia Commonwealth University.
Charles Maurice Cherry (1969-71, 1974),
Professor of Modern Languages, B.A., Furman University; M.A., University of South Carolina; Ph.D., Northwestern University.
Robert Carl Chesebro (1965), Charles Ezra Daniel Professor of Music, B.S., Wisconsin State University; M.M., D.M., Indiana University.

Jane Scofield Chew (1980), Professor of Modern Languages, B.A., Queens College; M.A., Ph.D., Pennsylvania State University.
Erik Kristofer Ching (1998), Assistant Professor of History, B.A., Pacific Lutheran University; M.A., Ph.D., University of California, Santa Barbara.
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John Glenwood Clayton (1972), Librarian, B.A., Wake Forest University; M.L., University of South Carolina; B.D., Ph.D., Southern Baptist Theological Seminary.

Carl Thomas Cloer, Jr. (1974), Professor of Education, B.S.Ed., Cumberland College; M.Ed., Clemson University; Ph.D., University of South Carolina.
Paul Martin Cook II (1976), Professor of Mathematics,B.S., M.S., University of Mississippi; Ph.D., Florida State University.
James Dan Cover (1971), Professor of Sociology, B.A., California State University at Long Beach; M.A., California State University at Los Angeles; Ph.D., University of Cincinnati.
Jerry Lynn Cox (1976), Professor of Modern Languages, B.A., Wichita State University; M.A., University of Colorado; M.S., Ph.D., Indiana University.
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Ramon Kyser (1971-95), Professor of Music Emeritus, B.A., M.M., Westminster Choir College; D.M.A., Peabody Conservatory of Music.
William Edward Leverette, Jr. (1960-88), Professor of History Emeritus, B.A., M.A., Ph.D., Vanderbilt University.

Roy Elwin Lindahl, Jr. (1968-95),
Professor of Classical Languages Emeritus, B.A., Monmouth College; B.D., Pittsburgh Theological Seminary; M.A., University of Michigan; Ph.D., Tulane University.
Rachel Sangster Martin (1957-84), Librarian Emeritus, A.B., Brenau College; B.S. in Library Science, University of North Carolina; M.A., State University of Iowa.
Laurin Currie McArthur, Jr. (1974-83),
Professor of Education Emeritus, B.A., M.A., University of South Carolina; Ed.D., Columbia University.
Edgar Vernon McKnight (1962-1998), William R. Kenan, Jr., Professor of Religion Emeritus, B.S., College of Charleston; M.Div., Ph.D., Southern Baptist Theological Seminary.
Nora Emily Mullens (1945-71), Assistant
Professor of Biology Emeritus, B.S.,
University of Tennessee; M.A.,
Peabody College.
Charles Stuart Patterson (1954-88),
Professor of Chemistry Emeritus, B.S.,
Furman University; M.S., Ph.D.,
University of North Carolina.

William Percival Pielou (1964-91), Professor of Biology Emeritus, B.S., M.S., University of Michigan; Ph.D., Michigan State University.
Benny Ramon Reece (1961-90), Professor of Classical Languages Emeritus, A.B., Duke University; M.A., Ph.D., University of North Carolina.
Alice Ruth Reid (1956-85), Professor of Health and Physical Education Emeritus, A.B., Valdosta State College; M.A., Columbia University; Ph.D., State University of Iowa.
Ray Crouse Roberts, Jr. (1969-95), Frederick W. Symmes Professor of Economics Emeritus, B.A., Duke University; M.S., Ph.D., University of North Carolina.
Charles Leland Rodgers (1956-88), Professor of Biology Emeritus, B.S., Furman University; M.A., Dulte University; Ph.D., University of North Carolina.
Ann Wyatt Sharp (1973-1996), Professor of English Emeritus, A.B., Alabama College; M.A., Ph.D., University of Alabama.

James Harrison Smart (1967-95), Professor of History Emeritus, B.A., M.A., Baylor University.
Charlotte Reed Smith (1948-92), Professor of Music Emeritus, B.A., Tift College; M.A., Eastman School of Music of the University of Rochester; Peabody Conservatory of Music; Juilliard School of Music.
David Anthony Smith (1960-91), Reuben
B. Pitts Professor of Religion Emeritus, A.B., Union University; B.D., Th.D., Southern Baptist Theological Seminary.
Garmon Brooks Smith (1968-91),
Professor of Education Emeritus, B.S., Western Carolina University; M.Ed., Ph.D., University of North Carolina.
Taylor Clarence Smith (1966-80), Professor of Religion Emeritus, A.B., Louisiana College; Th.M., Th.D., Southern Baptist Theological Seminary; Ph.D., University of Edinburgh.

Walter Lindsay Smith (1948-86), Professor of Music Emeritus, B.A., Furman University; M.Sac.Mus., D.Sac.Mus., Union Theological Seminary; Eastman School of Music.
Albert Bingham Somers (1973-1998), Professor of Education Emeritus, A.B., M.Ed., University of North Carolina;

Ph.D., Florida State University.
Alma Davis Steading (1970-87), Associate
Librarian Emeritus, B.A., Furman University; M.A., University of South Carolina; M.A., Presbyterian School of Christian Education; M.S. in Library Science, George Peabody College for Teachers.
James Tate Stewart (1955-92), Professor of English Emeritus, B.A., Vanderbilt University; M.A., Harvard University; Ph.D., Vanderbilt University.
Robert Cinnamond Tucker (1947-79), Librarian Emeritus, A.B., B.S. in Library Science, M.A., Louisiana State University; Ph.D., University of North Carolina.
Herbert Burnette Tyler (1986-1998), Professor of Education Emeritus, B.A., Furman University; M.Ed., Ph.D., University of South Carolina.
Carolyn Delores Wallin (1964-90), Associate Professor of Health and Physical Education Emeritus, B.S., M.Ed., University of Houston.
Marjorie Watson (1961-80), Associate Professor of Modern Languages Emeritus, A.B., Wesleyan College; M.A., Duke University.

## Administrative and Staff Personnel 1998-99

Kimberly L. Adams (1994), M.Ed., Student Activities Director
Rebecca J. Alexander (1996), B.S., Network Systems Manager
Betty J. Alverson (1965), M.A., Director of University Center

Michael A. Arnold (1997), M.A., General Manager, Timmons Arena
Joe J. Ashley (1975), B.A., Coordinator of Technical Services
Judith Gatlin Bainbridge (1976), Ph.D., Director of EducationalServices
Elcainey Baker (1989), Capital Construction Assistant
Roland C. Barefoot (1984), B.A., Director of Planned Giving
John D. Barker (1999), Ph.D., Director of Career Services
S. Lilly Bekele (1999), B.A., Area Coordinator
Amy T. Blackwell (1991), B.A., Development Systems Director
Carolyn W. Blalock (1987), Ed.D., Assistant Director of Graduate Studies
Lori D. Boatright (1997), B.A., Admissions Counselor
Paul M. Brandenburg (1999), B.A., Golf Course Grounds Superintendent
James H. Braziel (1995), Housing Services Manager
Jacob C. Breeden (1999), M.S., Web Development Director
Kenneth R. Bridwell (1980), M.A., Financial Systems Manager
Delores P. Buford (1974), Ed.D., Research Associate, Institutional Planning
Michelle M. Burnett (1997), M.Ed., Associate Director, Alumni Association
Gregory D. Burriss (1984), B.S., Supervisor of Landscape Gardening
Clayton W. Burton (1997), B.S., Computer Programmer/Analyst
Jane B. Burton (1989), B.S., Accounting Manager/Bursar
Leroy Butler (1997), B.A., Multimedia Director
Dexter J. Caldwell (1997), B.A., Technical Systems Consultant
Judith B. Chandler (1996), Ed.D., Associate Director, ContinuingEducation] Director, Lifelong Learning Programs
M Jean Childress (1991) B.G.S Information Technology Consültảnt

Carl Thomas Cloer, Jr. (1974), Ph.D., Coordinator of Special Counseling
Jean P. Cobb (1974), Accounting Manager
Gail Craig-Jager (1987), B.A., Controller1
Director, Financial Services
Mary Pat Crozier (1997), B.S., Construction Manager
Carol S. Daniels (1972), B.G.S.,
Coordinator of Student Services
Glenn A. Davis (1990), B.A., Central Receiving Supervisor
A. Stephen Dawes (1995), Ph.D., Director, Counseling Center
Ronald E. Dickert (1989), Safety and Fire Prevention Specialist
Randall T. Dill (1994), M.S., Administrative Systems Manager
David L. Drake (1997), B.S., Admissions Counselor
Todd Duke (1997), M.A., Business Manager, Timmons Arena
Susan T. Dunnavant (1997), Ed.D., User Services Manager
D. Dubose Egleston (1998), B.S., Academic Computing Specialist
Dana E. Evans (1988), B.A., Associate Director of Admissions
Regina Y. Fletcher (1998), B.A., Internship Specialist
Sarah A. Fletcher (1993), Ph.D., Learning in Retirement Coordinator
Doris B. Foster (1994), B.S., Personnel Analyst
Donald E. Fowler (1987), B.S., Director of Development
Catherine J. Frazier (1998), B.S., LAN Administrator
Marcella Frese (1998), B.M., Music Program Coordinator
Michael Gatchell (1993), B.A., Director of Major Gifts
Idella G. Glenn (1996), B.S., Director, Multicultural Affairs
Cynthia Grand (1986), B.S., Director of Computer Operations
Victor A. Greene, Jr. (1983), D.Min., Associate Chaplain

Teresa S. Griffith (1998), B.A., Associate Director, Alumni Association
Eric R. Harrell (1982), B.A., Operations Manager, Timmons Arena
Holly M. Herold (1998), B.G.S., Associate Director, Furman Fund
Shon R. Herrick (1996), M.Ed., Associate Director, Major Gifts
Phillip A. Howard (1996), M.A., Director, Furman Fund
James G. Hudson (1969), B.S., Director of Administrative Services
Kay B. Hudson (1978), Administrative Assistant to the President
Larry A. Hudson (1997), M.A., Assistant Director, Career Programs
Janet S. Huskey (1980), M.A., Administrative Assistant, Graduate Education/Summer Session
R. Kim Jenerette (1998), B.A., Associate Director, Financial Aid
Gwendolyn A. Johnson (1994), A.S., Director, Gospel Choir
Faye Sams Jordan (1973), A.A., Student Employment Director
Eddie W. Keeler (1987), Stockroom Supervisor
James H. Keller (1958-60, 1967), M.A., Director of Computer Programming
Allen Wayne King (1984), M.S., Director of University Housing
Douglas J. Lange (1996), M.B.A., Director, Facilities Services
Richard Porter Lange (1992), B.S., Computer Science Learning Resource Center Manager
Barbara Ann Lauerman (1997), B.A., Teacher, Child Development Center
Larry J. Lawter (1985), A.A.S., Director of University Store
Phillip B. Lewis (1988), B.S., Custodial Supervisor
Steven E. Long (1974), A.S., Drafter/ Estimator
Tammie M. Maddock (1995), M.B.A., Stewardship Director

Kyle F. Martin (1997), M.A., Chemistry Lab Coordinator
Michael T. McDonald (1996), B.B.A., Golf Professional
Owen Michael McFadden (1984), Ed.D., Director of Recreational Sports
Georgianna McMakin (1985), Ticket Manager
Robert M. Miller (1978), B.A., Director of Public Safety
William F. Miller (1978), Director of Golf Course
Vinson L. Moore (1982), M.A., Director of News and Media Relations
D. Elizabeth Moseley (1996), B.A., Associate Director, Planned Giving
M. Scott Murr (1998), Ed.D., Fitness Center Director
Richard Nelson (1995), M.B.A., Director of Information Services
Jerry W. Newman (1997), M.Ed., Operations Support Manager
Karen Lee Noren (1997), M.A., International Student Advisor
James C. Odom, Jr. (1980), Mail Services Supervisor
Lynn Shirley Osment (1994), M.A., Field Representative
Peggy L. Park (1961), Administrative Assistant for Vice President for Academic Affairs
Kathryn A. Pierce (1999), B.A., Admissions Counselor
C. Shea Powell-Morris (1995), M.A., Area Coordinator, University Housing
Margaret A. Praytor (1987), M.S.W., Associate Director, Counseling Center
Anne M. Purcell (1987), B.A., Director of Donor Research
Jeff P. Redderson (1997), M.B.A., Associate Director, Facilities Services
Charles A. Register (1990), B.S.A., University Photographer
Mary B. Ries (1988), M.Ed., Director of Parents Programs
Matthew R. Rissman (1996), B.S., Desktop Systems Specialist

John S. Roberts (1996), B.A., Director of Internal and Electronic Communications
Kenneth G. Roper (1986), Manager of Telecommunications
Herbert F. Sargent (1999), Assistant Golf Professional
Linda G. Sarratt (1992), B.A., Director of Budget Services
Lynda M. Sayer (1988), B.A., Associate Director of Financial Aid
Wade K. Shepherd (1998), M.A., Scientific Computing Specialist
Laura Brown Simmons (1984), B.A., Associate Director of Admissions
Anne H. Smith (1993), B.A., Financial Aid Counselor
Max G. Smith (1974), Ph.D., Grants Administrator
Nancy M. Spitler (1997), B.A., Director of Publications Services
Bernard P. Stanton (1993), B.S., Safety Services Coordinator
James T. Stewart, Jr. (1986), B.A., Director of Editorial Services
Maggie P. Stricltland (1998), M.B.A., Accountant
Linda F. Sulek (1985), A.A., Manager, North Village
Erin M. Taylor (1997), A.A., Purchasing Director
Astrid Truman (1997), A.A., CADD Operator
Gina Silver Varat (1994), Coordinator, Child Development Center
Sarah S. Wells (1965), A.S., Assistant Registrar
Sandra Kay Wheeler (1992) Ph.D., Lab Equipment Specialist
Shannon E. Wilkerson (1998), B.A., Director, Alumni Association
Courtenay L. Williams (1998), B.A., Assistant Director of Admissions
Sue H. Williams (1998), Teachers' Aide, Child Development Center
Susan H. Zeiger (1991), B.A., Director of Personnel and AffirmativeAction Officer

## Intercollegiate Athletics Staff 1998.99

John M. Block (1968), Ph.D., Vice President for Intercollegiate Athletics
Charles L. Alford III (1971), Ph.D., Faculty Chair of Athletics
Doug Allison (1995), M.S., Men's Soccer Coach
Nancy E. Baker (1985), M.A., Senior Women's Administrator and Director of Sports Medicine
Marshall A. Bettendorf (1996), B.A., Associate Director, Paladin Club
Terry Bradley (1988), M.S., Director of Marketing and Promotions
Dan Brinkman (1991), M.Ed., Athletic Academic Counselor
Teri Brinkman (1991), B.A., Director of Sports Information for Women
John Burns (1984), M.A., Associate Athletic Director, Compliance and Eligibility
Ted Cain (1999), M.Ed., Assistant Football Coach
Sherry J. Carter (1982), B.S., Women's BasketballCoach
Keylor Chan (1999), B.S., Volleyball Coach
Gary Clark (1998), Ph.D., Director, Paladin Club
Larry Davis (1997), M.A., Men's Basketball Coach
Julius Dixon (1994), B.A., Assistant Football Coach
Allan Edwards (1998), B.A., Assistant Football Coach
Joe Farmer (1993), M.A., Assistant Trainer
Bonnie Flynn (1995), M.A., Softball Coach
Bruce A. Fowler (1986), B.A., Assistant Football Coach

Clayton Hendrix (1988), B.A., Assistant Football Coach
Bobby Johnson (1976), M.A., Head Football Coach
Michael Jones (1997), B.S., Assistant Men's Basketball Coach
Robert Lamb (1987), B.A., Assistant Football Coach
Brian Lee (1993), B.A., Women's Soccer Coach
Eugene P. Mullin (1983), M.A., Track and Cross Country Coach
Ryan Odom (1997), B.A., AssistantMen's Basketball Coach
Ken Potosnak (1997), M.A., Assistant Men's Basketball Coach
Michel P. Potter (1978), B.S., Director of Intercollegiate Golf
Brian Reese (1995), M.B.A., Head Athletic Trainer
Hunter Reid (1986), B.S., Assistant Athletic Director, Sports Information
Brett Russell (1994), B.S., Physical Therapist
Todd Satterfield (1996), B.A., Men's Golf Coach
Paul Scarpa (1967), B.S., Men's Tennis Coach
Spear Sedgley (1991), Athletic Equipment Manager
Adrienne Shuler (1995), B.S., Assistant Women's Basketball Coach
Timothy Lee Sorrells (1986), M.A., Assistant Football Coach
Deborah L. Southern (1985), M.A., Women's Tennis Coach
Ron Smith (1993), M.A., Baseball Coach
Tim Taylor (1998), B.S., Assistant Women's Basketball Coach

## University Medical Services 1998-99

Watt McCain, Jr. (1969), M.D.; Peter A. Brenner (1976), M.D.; T. Dane Pierce, Jr. (1978), M.D.; James H. Beard, Jr. (1981), M.D.; W. Randolph Wilson (1986), M.D.; Mary Ann Shepard (1992), M.D.; Sybil A. Hil1 (1996), M.D.; Matthew D. Garber (1997), M.D., University Physicians

Sandra P. Adams (1988), R.N.C., Registered Nurse
Jane Cartee (1967), R.N., C.H.N.P., College Health Nurse Practitioner
Regina F. Fowler (1988), L.P.N., Licensed Practical Nurse
Tobbie Moody (1997), R.N., Registered Nurse
Judith F. Thompson (1981), R.N.C., Registered Nurse

## Correspondence Directory

Furman University, Greenville, South Carolina 29613
Telephone: 864-294-2034
Admissions, Undergraduate
Admissions, Graduate
Alumni Interests
Business and Financial Matters
Educational Program
Employment of Seniors and Alumni
Evening Courses
Graduate Work
Scholarships and Other Financial Aid
Student Accounts
Student Interests
Counseling
Summer Sessions
Transcripts and Academic Records
Vice President for Academic Affairs and Dean
Director of Career Programs
Director of Continuing Education
Director of Graduate Studies
Vice President for Enrollment
Accounting Manager
Vice President for Student Services
Director of Counseling Center
Associate Dean for Summer Sessions
Associate Dean and University Registrar

Visiting the Campus. Visitors are welcome.
The Admissions Office (located on the ground floor of Earle Infirmary) is open Monday through Friday from 9:00 to 5:00. Visitors desiring interviews with members of the staff are requested to make appointments in advance.

How to Reach Furman. Furman is five miles north of Greenville, South Carolina, on U.S. Highway 25. Greenville
is on U.S. Interstate 85 and is served by train, bus and airlines (GreenvilleSpartanburg Airport).

Further Information: You may receive additional information by using the following addresses:

E-mail: Admissions @ Furman.edu
World Wide Web: http://www.Furman.edu.

## University Calendar

## 1999

## Fall Term

New resident students arrive
Residence halls open for returning students
Orientation for new students
Enrollment Day
Classes begin
Parents Weekend
Homecoming
Fall Break
Thanksgiving holidays
Study Day
Examinations
Residence halls close at 10:00 a.m.

September 8
September 12
September 8-12
September 13
September 14
October 8-10
October 22-24
October 29-November 1
November 21-28
December 9
December 10, 13, 14, 15
December 16

2000
Winter Term
Residence halls open at 2:00 p.m. January 2
Enrollment Day
January 3

Classes begin
Study Day
Examinations
Residence halls close at 10:00 a.m.
January 4
February 18
February 19, 21, 22
February 23
Spring Term
Residence halls open at 2:00 p.m.
February 29
Enrollment Day
March 1
March 2
Classes begin
Easter holidays
Study Day
April 21-24
Examinations
Commencement
Residence halls close at 10:00 a.m.

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[^0]:    """Failure to do so will mean that the student will not be permitted to register lor classes.

[^1]:    47 Biogeography
    (4)

[^2]:    95 Special Topics in Religion

