## 2004 GRADUATE CATALOG

MIDDLE TENNESSEE STATE UNIVERSITY<br>established 1911<br>Murfreesboro, Tennessee

## Statement of Mission

Mition of higher learning in the state, the Southeast, and the nation, is a member of the State University and Community College System of Tennessee. The University draws energy from and responds to the vibrant and diverse culture of middle Tennessee, known for its internationally recognized arts, entertainment, and music communities; an innovative health care sector; a robust manufacturing economy; and the historic Tennessee Walking Horse. As a broad-based, comprehensive university, Middle Tennessee State University offers an extensive range of undergraduate programs and selected graduate programs, primarily serving students of the region but also attracting many others from across the nation and throughout the world. The University takes pride in providing quality educational programs that incorporate the most recent technologies to meet the changing needs of the dynamic environment. At the same time, it maintains a sense of community and a commitment to studentcentered learning. Its focus on scholarship reflects an increasing emphasis on research, creative arts, and public and professional service-activities that mirror the vitality of its students, its faculty, and the region. Middle Tennessee State University remains committed to the education of a non-racially identifiable student body and promotes diversity and access without regard to race, gender, religion, national origin, age, disability, or veteran status.

## Learning Goals

Middle Tennessee State University helps students become educated individuals. Those who avail themselves of the educational opportunities provided will be prepared to

1. live effectively in a changing, global society by broadening their interests and becoming lifelong learners;
2. observe, assess, and influence the contemporary world using scientific knowledge and an understanding of cultural and historical legacies;
3. think logically, critically, and creatively;
4. communicate clearly and precisely and understand the proper role of free expression in our society;
5. make sound judgments with an awareness of ethical, moral, and aesthetic values;
6. maintain physical and mental well-being;
7. acquire a working knowledge of a discipline or a group of related disciplines; and
8. participate actively in the world community by seeking and sharing knowledge, expertise, and creative undertakings.

## University Goals

Accordingly, Middle Tennessee State University will

1. provide student support services and a quality of student life that create a campus environment conducive to learning and personal development;
2. encourage lifelong relationships between the University and its students;
3. recruit quality faculty and maintain support services to assist faculty in instruction;
4. provide resources to encourage research, creative activity, and public and professional service;
5. develop individual, corporate, and public support for the University;
6. encourage student-centered learning through the development of academic partnerships within the public and private sectors;
7. work continually to strengthen and enhance the academic core; and
8. provide financial and physical resources to accomplish the mission.

## Student Characteristics

The University greatly values cultural diversity and actively promotes environments conducive to success for all students. Enrollment has grown dramatically over the past few years, a pattern predicted to continue as academic programming is enhanced and the population of the region increases. MTSU has raised academic standards, and its freshman ACT scores annually exceed both state and national averages. The University Honors College and an aggressive scholarship program attract students with exceptional academic records seeking added intellectual challenges. Student support services include a nationally recognized program for disabled students as well as cultural and athletic activities that complement the academic experience while strengthening the development of the individual student.

Middle Tennessee State University's student body is increasingly diverse and multicultural. Ethnic minorities account for approximately 16.5 percent of the student body, and the University's academic programs attract students from more than 90 countries. Many of the University's students are nontraditional; three-quarters of MTSU students are full-time. Although the University offers a full complement of on-campus activities and living arrangements, many students work off campus, and the majority commute from surrounding communities.

## University Academic Structure

The University offers, through seven colleges and thirty-six academic departments, instruction in the liberal and fine arts, the sciences, education, business, mass communication, and a variety of other fields. The recording industry and aerospace programs attract students nationwide. The teacher education program has a distinguished history and is one of the largest in Tennessee. Students pursuing bachelor's degrees complete General Education courses that provide the skills and knowledge essential for major and minor programs.
The University's graduate offerings are vital to the professional development of the region. The College of Graduate Studies offers five doctoral, four educational specialist, and thirty-three master's programs. The largest enrollments are found in business administration, education, and psychology. Middle Tennessee State University anticipates expansion of its graduate programs in selected areas.
The University recruits nationally for talented and dedicated faculty members committed to teaching, research, creative activity, and public and professional service. The continuing education program matches the expertise of the faculty with the evolving needs of the public. Nine Chairs of Excellence and two endowed chairs provide special opportunities for bringing faculty of exceptional reputation to the campus. The Center of Excellence for Historic Preservation, the Center of Excellence for Popular Music, the Tennessee Center for the Study and Treatment of Dyslexia, and specially funded centers with national reputations enrich graduate and undergraduate instruction, research, and outreach programs.

## The University Calendar, 2004-2005

Calendar subject to change as conditions may require.
Please see class schedule book each semester for registration, fee payment, drop/add, and other important dates.
Contact Guidance Services for dates and times for all entrance exams except for the Graduate Record Examination (GRE) and Graduate Management Admissions Test (GMAT) which will be given at the Sylvan Technology Centers.

## Spring Semester 2004

January 12
January 19
March 19
March 22-27
March 27
April 9
April 10
May 4
May 5-11
May 7
May 15

Classes begin
Martin Luther King Holiday - no classes Last day for filing theses and dissertations in Graduate Office for May graduation Spring Break
Written doctoral qualifying exams begin University holiday for all employees Written master's and specialist's comprehensive exams begin
Last day of classes
Final examinations
Last day to remove " I " grades for those who plan to graduate in May Commencement

## Summer Session I 2004

May 17
May 31
June 4

Classes begin
Memorial Day Holiday - no classes
Final examinations, Session I

## Summer Sessions II, III, and IV 2004

June 7
June 10
June 18
July 2
July 5
July 9
July 10
July 12
August 6
August 12
August 13
August 14

Classes begin for Sessions II and III Deadline for filing Intent to Graduate for August 2004
Last day for filing theses and dissertations in Graduate Office for August graduation Written doctoral qualifying exams begin Independence Day Holiday - no classes Final examinations, Session II
Written master's and specialist's comprehensive exams begin
Classes begin, Session IV
Last day to remove " I " grades for those who plan to graduate in August Final examinations, Sessions III and IV; classes meeting M-Th
Final examinations, Sessions III and IV; classes meeting M-F
Commencement

## Fall Semester 2004

August 30
September 6
September 7
October 18-23
October 15

October 16-19
October 23
October 30
November 25-27
December 10-16
December 11
December 18

Classes begin
Labor Day Holiday - no classes
Deadline for filing Intent to Graduate for December 2004
Mid-semester
Last day for filing theses and dissertations in Graduate Office for December graduation
Fall Break - no classes
Written doctoral qualifying exams begin Written master's and specialist's comprehensive exams begin
Thanksgiving Holidays - no classes
Final examinations
Last day to remove " I " grades for those who plan to graduate in December
Commencement

## Spring Semester 2005

January 17
January 18
January 28
March 7-12
March 7-12
March 11
March 25

April 29-May 5
May 7
May 7

Apradion
April $2 \quad$ Written doctoral qualifying exams begin
April $9 \quad$ Written master's and specialist's compre-
Martin Luther King Holiday - no classes Classes begin
Deadline for filing Intent to Graduate for May 2005
Spring Break
Mid-semester
Holiday - no classes
Last day for filing theses and dissertations hensive exams begin
Final examinations
Last day to remove " I " grades for those who plan to graduate in May
Commencement

## Summer Session I 2005

May 16
May 30
June 3

## Classes begin

Memorial Day Holiday - no classes
Final examinations, Session I

## Summer Sessions II, III, IV 2005

June 6 June 9

June 10
July 4
July 7
July 8
July 9

Classes begin for Sessions II and III Deadline for filing Intent to Graduate for August 2005
Last day for filing theses and dissertations in Graduate Office for August graduation Independence Day Holiday - no classes Final examinations, Session II; classes meeting M-Th
Final examinations, Session II; classes meeting M-F
Written master's and specialist's comprehensive exams begin

July 11
August 1
August 5
August 11
August 12
August 13

Classes begin, Session IV
Written doctoral qualifying exams begin Last day to remove "I" grades for those who plan to graduate in August Final examinations, Sessions III and IV; classes meeting M-Th
Final examinations, Sessions III and IV; classes meeting M-F
Commencement

Fall Semester 2005
August 29
Classes begin


Middle Tennessee State University is a member of the Tennessee Board of Regents system, the sixth largest system of higher education in the nation. The Tennessee Board of Regents is the governing board for this system which comprises six universities, thirteen community colleges, and twenty-six area technology centers. The TBR system enrolls more than 80 percent of all Tennessee students attending public institutions of higher education.
Middle Tennessee State University, in its educational programs and activities involving students and employees, does not discriminate on the basis of race, color, national origin, sex, religion, or age. Furthermore, the University does not discriminate against veterans or individuals with disabilities.

## Directory for Correspondence

The course offerings and requirements of Middle Tennessee State University are continually under examination and revision. This catalog presents the offerings and requirements in effect at the time of publication, but there is no guarantee that they will not be changed or revoked. This catalog is not intended to state contractual terms and does not constitute a contract between the student and the institution.

Middle Tennessee State University reserves the right to make changes as required in course offerings, curricula, academic policies, and other rules and regulations affecting students to be effective whenever determined by the institution. These changes will govern current and formerly enrolled students. Enrollment of all students is subject to these conditions.
The institution does not warrant or represent that any student who completes a course or program of study will necessarily acquire any specific skills or knowledge or will be able to successfully pass or complete any specific examination for any course, degree, or license.
Current information may be obtained by calling or writing the following sources:

| General Inquiries | Campus Operator (615) 898-2300 |
| :---: | :---: |
| Admissions, Graduate | 898-2840 |
| Admissions, Undergr | 898-2111 |
| Adult students | .... Adult Services Center 898-5989 |
| Coop students | ...... Cooperative Education 898-2225 |
| Disable | .............. Disabled Student Services 898-2783 |
| Distance learning.... | $\qquad$ Continuing Studies and Public Service 898-5611/2177 |
|  | ... Business Office 898-2761 |
| Financial assistan | ......... Financial Aid 898-2830 |
| General academic policies | ..... Academic Affairs 898-2880 |
| Graduate College .. | .... Graduate Office 898-2840 |
| Dean | ... 898-5897 |
| Associate Dean | . 898-2840 |

General Inquiries
(615) 898-2300
Admissions, Graduate898-2111
Adult students ..... 898-5989
Coop students
898-2225
Disabled students Disabled Student
Services 898-2783
Public Service 898-2761
Financial assistance. Financial Aid898-2830
General academic policies ..... 898-2880
Graduate College ..... 898-5897
Middle Tennessee State University Murfreesboro, Tennessee 37132

| Graduate Studies |  |
| :---: | :---: |
|  | Select the number corresponding to your program of study: |
| Accounting, Business Education, Economics and Finance, Management and Marketing, Computer Information Systems, Health Care Management...................... 898-2843 |  |
|  |  |
| Biology, Chemistry, Computer Science, Engineering Technology and Industrial Studies, Foreign Languages, Gerontology, History, Mass Communication, Mathematical Sciences, Music, Sociology $\qquad$ 898-5494 |  |
| Aerospace Education, Aviation Administration, <br> Criminal Justice, Nursing, Critical Care Nursing, <br> Nursing Informatics, Geoscience, HPERS, <br> Human Sciences, Psychology $\qquad$ 898-5352 |  |
|  |  |
|  |  |
|  |  |
|  | Art Education, Elementary and Special Education, |
|  | Educational Leadership, English, |
|  | Dyslexic Studies ............................................. 898-2218 |
|  | Non-degree seeking .......................................... 898-2840 |
| Housing reservations ............ Housing and Residential Life |  |
|  | 898-2971 |
| International students .................... International Programs |  |
|  | nd Services 898-2238 |
| Library resources ..................................... Walker Library |  |
|  |  |
| Majors and course offerings ............. School or Department |  |
|  | offering program |
| Minority or multicultural affairs $\qquad$ Multicultural Affairs |  |
|  |  |
|  | 898-2987 |
| Night classes .............................. Continuing Studies and |  |
|  |  |
| Off-campus classes ...................... Continuing Studies and |  |
|  | Public Service 898-2177 |
| Parking regulations ...... Parking and Transportation Services |  |
|  | 898-2850 |
| Reenrollment requirements .............. Graduate Admissions |  |
|  | 898-2840 |
| Registration ..................................... Scheduling Center |  |
|  | 898-5800 |
| Student life, activities .............................. Student Affairs |  |
|  | 898-2440 |
| Teacher licensure ....................... Teacher Licensing Offic |  |
|  | 898-2877 |
| Testing arrangements .......................... Guidance Services |  |
|  | 898-2670 |
| Transcripts ............................................. Records Office |  |
|  | 898-2600 |
| Veterans ............................................... Records Office |  |
|  | 898-2601 |
| Women's issues .................................... Women's Center |  |
|  | 898-2193 |

## Administrative Officers

## University

President Sidney A. McPhee, Ed.D.
Executive Vice President and Provost Kaylene Gebert, Ph.D.
Vice President for Development and University Relations William J. "Joe" Bales, M.S.
Vice President for Business and Finance John W. Cothern, J.D.
Vice President for Student Affairs and Vice Provost for Enrollment Management Robert Kyle Glenn, Ph.D.
Vice Provost for Research and Dean, College of Graduate Studies Abdul S. Rao, M.D., D.Phil.
Dean, College of Basic and Applied Sciences Thomas J. Cheatham, Ph.D.
Dean, Jennings A. Jones College of Business E. James Burton, Ph.D.

Dean, College of Education and Behavioral Science Gloria L. Bonner, Ed.D.
Dean, College of Liberal Arts John N. McDaniel, Ph.D.
Dean, College of Mass Communication Anantha Babbili, Ph.D.
Dean, College of University Honors Philip M. Mathis, Ed.D., Interim
Dean, Division of Continuing Studies and Public Service Rosemary W. Owens, Ed.D.
Dean, University Library Don Craig, M.L.S.

## The Tennessee Higher Education Commission

Riley Darnell, Secretary of State
General Wendell Gilbert, Clarksville
William Ransom Jones, Murfreesboro
Debby Patterson Koch, Secretary, Nashville
Omar Lopez, Murfreesboro
John Morgan, State Comptroller
Jim Powell, Sr., Chair, Limestone
June Scobee-Rodgers, Signal Mountain
Dale Sims, Acting State Treasurer
Kevin Teets, Martin
A.C. Wharton, Jr., Vice-Chair, Memphis

Brad Windley, Vice-Chair, Tullahoma
Katie Winchester, Dyersburg
Douglas Wood, Nashville
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## The Tennessee Board of Regents

Phil Bredesen, Governor of Tennessee, Chair, Nashville
Frank Barnet, Knoxville
Demetra Godsey Boyd, Clarksville
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Kathyrn Byrd, Maryville
Matthew B. Chapman, Mt. Juliet
Noble Cody, Cookeville
Robert Jack Fishman, Morristown
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Jonas G. Kisber, Jackson
W. Keith McCord, Knoxville

Leslie Parks Pope, Johnson City
Richard G. Rhoda, Executive Director, THEC, Nashville
J. Stanley Rogers, Manchester

Maxine Smith, Memphis
Lana Seivers, Commissioner of Education, Nashville William H. Watkins, Jr., Memphis
Ken Givens, Commissioner of Agriculture, Nashville

## Accrediting Agencies and Memberships

AACSB - The Association to Advance Collegiate Schools of Business
Accrediting Council of Education in Journalism and Mass Communication
American Association of Colleges for Teacher Education
American Council on Education
Association of State Colleges and Universities
Conference of Southern Graduate Schools
Council of Applied Master's Programs in Psychology
Council of Graduate Schools in the United States

National Association for Sport and Physical Education
National Association of Industrial Technology
National Association of Schools of Music
National Council for Accreditation of Teacher Education
Southern Association of Colleges and Schools
Tennessee College Association
Teachers College Association of Extension and Field Services
Tennessee Conference of Graduate Schools

## The Graduate Council

## Graduate Council Mission Statement

The Graduate Council plays a crucial role in the oversight and planning of all MTSU graduate courses and graduate degree programs, in establishing criteria for the appointment and reappointment of graduate faculty, in assessing graduate student issues and concerns, and in recommending to the dean of the College of Graduate Studies University-wide policies and procedures for implementation. The Graduate Council advises in the modification of existing programs and in the approval and implementation of any new programs. All student activities leading to advanced degrees proceed under policies and regulations established and reviewed by academic departments, the Graduate Council, and the College of Graduate Studies.
The Graduate Council provides leadership in the pursuit of excellence in scholarly activity and serves as an advocate in obtaining resources for graduate programs.

Only full-time MTSU faculty holding membership on the graduate faculty may serve on the Graduate Council. Council members are appointed by the president to serve three-year terms with three representatives per college. Two graduate student representatives who meet all graduate academic standards are also appointed. To ensure continuity and institutional memory in the creation and implementation of policies and procedures, one third of the council members rotate off each year and are replaced by five new faculty members representing each college. Graduate students are appointed to the council each academic year, and the graduate college dean and the six academic deans serve as exofficio members. The vice chair, who conducts meetings in the absence of the chair and who serves as chairelect, and the recording secretary of the Graduate Council are elected annually. The chair, in consultation with the dean of the College of Graduate Studies, is responsible for setting the council's agenda.


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# Academic and Student Services 

Middle Tennessee State University has a large and beautifully landscaped campus of approximately 500 acres and 153 permanent buildings totaling over 4 million square feet. Campus buildings are shown on a map printed in this catalog.

## Adult Services Center

The Adult Services Center provides information for prospective adult learners, which includes most graduate students. The center also provides information and referrals to students about all aspects of academic and social life at MTSU. Located in Keathley University Center, Room 320, the center operates from 7:30 a.m. to 6:30 p.m. (except Fridays) during the Fall and Spring semesters to serve the varied schedules of working adults.
The center provides a place to meet and share ideas with other adult learners. The student organization called OWLs (Older Wiser Learners) functions as a support system, a social organization, and a service organization. The honorary organization for adult learners, Pinnacle, is also sponsored through the Adult Services Center and any graduate student with a 3.4 GPA may apply. Additional information is available by calling (615) 898-5989.

## Alumni Association

The mission of the Middle Tennessee State University Alumni Association is to foster sound relationships between the University and its alumni and to provide a strong force for the advancement and support of the University by its alumni. A Board of Directors governs the association and the Alumni Relations Office facilitates the programs and services of the association. Establishing and promoting scholarships is an ongoing endeavor of the Alumni Association. The Alumni Relations Office is located in the Alumni Center, one of the four original campus buildings. Visit www.mtalumni.com or call 1-800-533-MTSU.

## Art Department Slide Library

Located in Saunders Fine Arts 309, the Slide Library is a resource for the art faculty and for the University population at large. The library's 50,000 slides include examples of art from the prehistoric to contemporary era.

## Athletics

The MTSU Athletics Program strives for excellence in the development of its student-athletes and the quality of its several sports teams. The program supports the academic, athletic, and social education of its student-athletes by encouraging them to develop the values of respect for themselves and others and to take pride in achievement and making positive contributions to the communities in which they live.

MTSU is committed to quality athletic programs that bring the campus community together and promote a sense of pride and tradition in academic and athletic excellence. Athletics also brings the University regional and national recognition and provides a link between the University and its alumni and the community at large. It helps generate alumni and public support for all aspects of the University. The athletics program provides quality faculty and leadership to campus programs. It gives students, faculty, and alumni opportunities for innovative public service activities such as the "Reading Raider" program, which has partnered with area elementary schools to promote student reading skills. It uses athletic, financial, and physical resources to maintain and develop athletic programs to accomplish the mission of the University.
The University is a member of the Sun Belt Conference and National Collegiate Athletic Association, competing in NCAA Division I in all sports. MTSU is represented annually in baseball, basketball, cross country, football, golf, tennis, indoor track, and outdoor track for men and by basketball, cross country, golf, soccer, softball, tennis, indoor track, outdoor track, and volleyball for women.
Both full-time and part-time students are admitted to all home football, basketball, and baseball games by presenting their valid ID cards at the gate. Athletic events in other sports require no admission and are open to the public and campus community. The ticket office is located at Floyd Stadium Gate 1A. Additional ticket information can be obtained by phoning (615) 898-2103 or 1-888-YES-MTSU.
MTSU's Title IX coordinator is Forrestine Williams, 220 Cope Administration Building, (615) 898-2185.

## Cafeterias

Four University locations offer wholesome food for students at reasonable rates: the Grill in Keathley University Center; McCallie Dining Hall in Corlew; James Union Building Cafeteria; and CyberCafe in Woodmore. They are operated for the benefit and convenience of the students, faculty and their guests, and other guests on the campus who may be attending conferences or other official functions. Several different meal plans are available for those who are interested.

## Career and Employment Center

The University provides a year-round centralized placement service for its students and alumni through the Career and Employment Center located in Keathley University Center, Room 328. Satellite offices are being established to serve the needs of students in each of the colleges. The program is designed to assist prospective graduates and alumni in securing career positions. Each year employers from business, industry, government, and education conduct on-campus in-
terviews with students in the Career Center. Other placement services include the development of reference files for credentials, career job listings, part-time and summer employment opportunities, and the career library.

## Center for Historic Preservation

One of two Centers of Excellence at MTSU, the Center for Historic Preservation (histpres.mtsu.edu/histpres) was established in 1984. It is a research and public service institute committed to the preservation, protection, enhancement, and sensitive promotion of the historic environment. Through its varied projects, programs, and activities, the center responds directly to the needs and concerns of communities and organizations working to include heritage in their future economic development strategies. Providing leadership and assistance on a local, state, regional, and national basis, the center's work falls within four initiatives.
Town and country preservation recognizes the unique heritage, resources, and problems of rural areas and small towns. National Register nominations for individual buildings and historic districts are an ongoing priority of this initiative. The Tennessee Century Farm Program is a documentary and educational project for farms that have been in the same family for at least 100 years. The African-American Rural Church Project, also a continuing project, documents the state's historic black churches, often identifying schools and cemeteries as well.

Heritage education addresses the use of local historic resources as teaching tools in the $\mathrm{K}-12$ grades. The center cooperates with the MTSU College of Education and Behavioral Science and local schools to develop and test new teaching materials and provide teacher-training workshops. The center also works closely with community heritage organizations to guide and assist them in preservation and education projects. The Heritage Education Network (histpres.mtsu.edu/ then) is a national Web site for teachers sponsored in part by the National Center for Preservation Technology and Training. The center director also serves as the senior editor of the Tennessee Historical Quarterly, a valuable tool for high school and college teachers.

The Tennessee Civil War National Heritage Area (histpres.mtsu.edu/tncivwar) is the center's primary federal grant funded project. Created by Congress in 1996, the Heritage Area focuses on the preservation, interpretation, and heritage development of the multiple legacies of the Civil War and Reconstruction era in Tennessee. The center is the only university unit in the nation to serve as the administrative head of a National Heritage Area, which are partnership units of the National Park Service. The Heritage Area provides technical services to institutions, agencies, and property owners across the state and develops funding partnerships with groups, governments, and institutions which work with the center to establish joint projects and programs of long-lasting benefit to the state and nation. As part of the Heritage Area effort, the center plays an active role in the Alliance of National Heritage Areas and directs the alliance's Heritage Development Institutes, which are professional train-
ing workshops held across the nation. The alliance provides support for graduate interns who participate in the workshop programs. The center also works closely with the Long Distance Trails Program of the National Park Service to document and develop preservation alternatives for National Reg-ister-eligible properties along the Trail of Tears in Tennessee.
The museum and historic sites initiative offers assistance to heritage museums in basic planning, adaptive restoration of historic buildings for museum use, collections management, and exhibit development. The center focuses on addressing the needs and problems of small museums.
Graduate-level staff teach two historic preservation courses each year for the Department of History and direct a large number of theses. The center funds a limited number of graduate research assistantships and fellowships each year. Graduate and undergraduate students work at the center to assist staff on a variety of applied research and public service projects, gaining valuable interdisciplinary experience to supplement their in-class training. The center's technical library and facilities are visited by and serve students, interested individuals, and preservation professionals.

One recent project, The Tennessee Encyclopedia of History and Culture Online Edition, is a partnership among the center, the Tennessee Historical Society, and the University of Tennessee Press. Launched in 2003, the encyclopedia Web site provides a comprehensive reference for the state's history.

## Center for Popular Music

The Center for Popular Music (CPM) is an archive and research center devoted to the study of American popular music from the Colonial era to the present. It was established in 1985 as one of sixteen Centers of Excellence at universities in the Tennessee Board of Regents system. The center's mission is to promote research and scholarship in American popular music and to foster an appreciation of America's diverse musical culture. To carry out this mission, the CPM maintains a large research library and archive; presents public programs that interpret various aspects of American vernacular music; engages in original research projects; and disseminates the results of research through publications in various media.

The CPM's library and archive is one of the largest and best popular music research collections in the country. Materials in the center's archive and library fall into three broad categories. First are extensive holdings of the various types of media in which music has been fixed and sold as a commodity. These include print materials such as sheet music, song books, song broadsides and songsters, and sound recordings in formats ranging from cylinders to compact discs. The center's sound archive is one of the largest in the country and consists of approximately 140,000 commercial sound recordings as well as many hours of unique unpublished recordings of music and interviews. The CPM's sheet music collection of approximately 65,000 items is the largest in the Southeast, and its library of gospel songbooks is one of the most extensive of any repository not associated with a reli-
gious organization. Second are various materials that are needed to study popular music in all its musical, cultural, historical, technological, and commercial contexts, including items such as photographs, posters, playbills, concert programs, trade catalogs, news clippings, and personal papers of musicians, songwriters, and business people. Third are books, periodicals, and other reference materials about popular music. The center has one of the largest and most comprehensive libraries of books and periodicals about popular music in the country.

Materials in the center's collection do not circulate but are available to anyone doing research on American popular music. The center's resources support undergraduate, graduate, and faculty research in a variety of disciplines and departments. In keeping with one of the aims of the Centers of Excellence program, the Center for Popular Music serves as a research resource for people far beyond the bounds of the University. Center staff members have fielded research queries from every state in the union and from foreign countries representing every continent except Antarctica. Authors, journalists, media producers, performers, and students writing dissertations have all made use of the center's archive and library.
The center's public programs include lectures, conferences, symposia, and concerts of contemporary and historical popular music.

## Child Care Lab

The Campus Child Care Lab, located in the Womack Lane Building on Homecoming Circle, provides quality care for children ages 3-5 whose parents are attending MTSU. In the Fall and Spring semesters, first priority is given to families who need Monday/Wednesday/Friday care OR Tuesday/ Thursday care; second priority is given to families who need full-time care (Monday-Friday). In the Summer term only, first priority is given to families who need full-time care. The facility is licensed for 24 children. In addition to educational programming, a hot lunch and two snacks are provided daily. Hours of operation are 7:00 a.m.-5:00 p.m., Monday-Friday. The Campus Child Care Lab also provides preschool teaching experiences for MTSU students. For more information, call (615) 898-2970 or visit the Web site at www.mtsu.edu/~stuaff/childcare.

## Disabled Student Services

Disabled Student Services is the coordinating body which distributes information concerning services available to students with disabilities. The office acts as an advocate for disabled students at the University, surveying the needs of these students and developing programs to meet those needs. Information and assistance can be obtained by calling (615) 898-2783 or visiting the office located in Keathley University Center, Room 120.

MTSU's ADA/504 coordinator is Watson Hannah, 119 Cope Administration Building, (615) 898-5366.

## Endowed Chairs

Several academic programs are enriched through the establishment of chairs dedicated to the support of a particular discipline. The chairholders may be full-time faculty members or may be individuals from the appropriate business or professional field who are on campus for special seminars or lecture series.

Two chairs, funded by gifts to the University Foundation, are administered through the Economics and Finance Department, of which the chairholders are members. More information is available through that department. The chairs are

## Martin Chair of Insurance <br> Weatherford Chair of Finance

MTSU houses nine Chairs of Excellence, established with a combination of private, University, and state funds. They are

The Jennings Jones Chair in Free Enterprise
Jennings A. Jones College of Business
The Jennings Jones Chair in Urban and Regional
Planning
Jennings A. Jones College of Business
The John Seigenthaler Chair in First Amendment

## Studies

College of Mass Communication
The Dr. Carl Adams Chair in Health Care Services
Interdisciplinary
The National HealthCare Chair in Nursing
School of Nursing
The Robert E. and Georgianna West Russell Chair in
Manufacturing Excellence
Engineering Technology and Industrial Studies Department

## The Katherine Davis Murfree Chair in Dyslexic

Studies
Interdisciplinary
John C. Miller Chair in Equine Reproductive
Physiology
School of Agribusiness and Agriscience
Mary E. Miller Chair in Equine Health
School of Agribusiness and Agriscience

## Albert Gore Research Center

The Albert Gore Research Center preserves and makes available for research a variety of historical documents and photographs. Its collections focus on the history of politics and public policy and on Middle Tennessee State University and the region it serves. The Gore Center assists a variety of researchers, including undergraduates; graduate students; MTSU administrators, faculty, and other scholars; the media; and citizens of the local community. The center is named for Albert Gore, Sr. (B.S., MTSU '32), whose papers from his Congressional career (1939-1970) form the largest and one of the most important collections in the repository.

## Housing and Residential Life

Housing facilities on campus include 22 residence halls and apartment complexes housing 3,400 single students and families. Information may be obtained from Housing and Residential Life, Keathley University Center 300.

## Philip C. Howard Music Library

Located within Instructional Media Resources in McWherter Learning Resources Center, Room 101, Howard Music Library houses audio and video recordings and equipment, musical scores, and reference materials. Anyone with a valid MTSU ID may borrow scores. Recordings circulate only to faculty and staff but may be used by anyone in-house. The Howard Music Library is part of the McLean School of Music. (See also McLean School of Music in this catalog.)

## Information Technology

The MTSU Information Technology Division (ITD) supports computing and information technology resources on campus. ITD manages the campus network and MTSU's primary academic and administrative computing systems; provides telecommunication services for the campus; promotes and supports instructional technology, including faculty consultation and training and maintenance support for all campus technology-based classrooms; provides technical support and training for the use of microcomputer hardware and software; provides a help desk that never closes during the semester; supports MTSU's primary administrative applications such as student information, human resources, and PipelineMT; and administers the STA (Student Technology Assistant) program, the campus ID system, and the MTSU Web site.
Any MTSU student or faculty or staff member may have an account on the central server for accessing on-campus resources and state, regional, national, and international networks including the Internet. Students may activate their accounts at www.mtsu.edu/changepw, on any Internet-accessible computer. The account will be ready to use within 10 minutes. Faculty and staff accounts are created upon completion of an application. The application forms are available online at www.mtsu.edu/~itd/forms and at the Information Technology Division Office, Cope Administration Building, Room 3.
For more information, call the ITD help desk at 898-5345 or e-mail help@mtsu.edu.

## Instructional Media Resources (Media Library)

Instructional Media Resources (IMR), located in McWherter Learning Resources Center, Room 101, manages a large collection of videotapes, DVDs, laserdiscs, audio tapes, CDs, and CD-ROMs. It also features study rooms and carrels, an open computer lab with both Macintosh and Pentium computers, laser printers and scanners, and typewriters available for walk-in use by faculty and students. Faculty members may check out all materials, reserve IMR materials, and place their
own multimedia resources on reserve in the Media Library for use by their students. Staff and students may view video materials in the Media Library and may check out audio materials.

## The Instructional Technology Support Center

The Instructional Technology Support Center (ITSC), in the McWherter Learning Resources Center, provides facilities, training, and support for the use of instructional technology by MTSU faculty, MTSU students, and K-12 teachers. The ITSC consists of several related units and facilities, including Audio/Visual Services, Instructional Media Resources, two computer labs, a graduate student multimedia development center, a twenty-first century classroom, and a satellite videoconferencing center.
Two PC computer labs and one PC/Macintosh computer lab are available in the ITSC for use by faculty and students. A description of the hardware and software in the computer labs and a monthly listing of open hours are posted on the ITSC Web page (www.mtsu.edu/~itsc). Graduate students can create multimedia projects or presentations at four multimedia development stations in the ITSC.

Audio/Visual Services maintains an inventory of audio/visual equipment for faculty check-out, repairs campus audio/ visual equipment, provides dubbing services, records off-air programming for classroom use, and supports satellite services. Audio/Visual Services also offers professional video production services for MTSU faculty and administrators, including studio production, remote production, post production, and satellite uplinks and downlinks.
Instructional Media Resources (Media Library) - See above.
The Satellite Videoconferencing Center offers quality educational programming to $K-12$ schools by satellite to nine rural Tennessee counties and by cable television to viewers in Rutherford and two other middle Tennessee counties. The satellite facilities can be scheduled by units across campus for local, statewide, or national broadcast of special events and programs. Both digital and analog C-band transmission options are available.

## Keathley University CenterJames Union Building

The Keathley University Center and James Union Building are service-oriented buildings for the use of the campus community. Services and facilities include

- a modern, self-service bookstore;
- a complete-service post office with individual mailboxes available;
- a mini-market with a variety of snacks;
- meeting rooms, ballroom, and auditorium for clubs, organizations, and campus-sponsored programs;
- diversified programs which include movies, musical groups, speakers, dances, and cultural events all planned and presented by student committees; and
- food services including the Keathley University Center Grill and James Union Building banquet and luncheon services.


## Libraries and Archives

Numerous library and archive resources are located on the MTSU campus. Copying of materials housed in these facilities is permitted only in compliance with federal copyright statutes and in accordance with departmental rules and regulations. Resources include Art Department Slide Library, Center for Popular Music, Gore Center, Howard Music Library, Instructional Media Resources, Walker Library, and Women's Studies Library. Detailed information about each is in this section.

## McWherter Learning Resources Center

The McWherter Learning Resources Center provides the opportunity for a different approach to learning. Completed in 1975, this unique 65,000 square-foot facility received national recognition for the award-winning design and is considered a model by other institutions throughout the region. The McWherter Learning Resources Center is the primary facility for teacher education programs and provides instructional technology support to faculty and programs at MTSU as well as area school districts.

In addition to the Instructional Technology Support Center, the support areas of Photographic Services and Publications and Graphics have the dual responsibility of producing materials for classroom use and for serving the entire University community's photography and publication needs. Also housed in the facility are the WMOT-FM Radio Station and the Albert Gore Research Center.

## Multicultural Affairs

The Office of Multicultural Affairs provides a welcoming and supportive environment for minority students. The office also serves as a link between ethnic minority students and the University community. The mission of the Office of Multicultural Affairs is to provide support services for students; to assist in achievement of life goals; and to increase academic, social, cultural, moral, and physical development. In addition, the director of Multicultural Affairs is an advocate for the needs of the ethnic minority student population. More information may be obtained by calling (615) 898-2987 or writing to MTSU P.O. Box 88, Murfreesboro, TN 37132.

## Murphy Center

Charles M. Murphy Center is a multipurpose building for instruction, recreation, athletics, and convocations. This versatile structure provides facilities that enhance total health, physical education, recreation, and safety programs as well as house outstanding athletic and entertainment events. The complex includes the Monte Hale Basketball Arena, two auxiliary gymnasiums, four handball courts, classrooms, two
dance studios, an indoor track, indoor tennis courts, men's and women's dressing rooms, and weight training equipment. The student ID office is located in Murphy Center (track level).

## Recreation Center

The Campus Recreation Office, located in the Recreation Center, administers a comprehensive recreation program for MTSU students. Opportunities include participation in team or club sports, outdoor pursuits, fitness activities, and aquatic programs. A wide variety of outdoor and other recreation equipment is available for checkout by students.
The Recreation Center, which opened in Fall 1995, provides students with a state-of-the-art facility. The center includes six basketball/volleyball courts, six racquetball courts, an indoor track, an aerobics room, an 8,000-square-foot free weights area, cardiovascular machines, an indoor swimming pool, locker rooms, an indoor gym for soccer and roller hockey, a rock climbing wall, an outdoor pool, an outdoor ropes course, and a sun deck with four sand volleyball courts adjacent. The center is open seven days a week during the Fall and Spring semesters and the Summer term. The Recreation Center closes during fall break, Thanksgiving holidays, Christmas holidays, and spring break. The schedule may be adjusted during other University holidays and for certain special University events. More information on programs or the center may be obtained by contacting the Campus Recreation Office at (615) 898-2104.

## Statement of Community Standards of Civil Behavior

Middle Tennessee State University is committed to the ideal of developing and nurturing a community of scholars. The choice to associate or affiliate with the MTSU community is freely made by students, staff, and faculty; nevertheless, it is assumed that each person who joins the community will accept and practice the following core values and expectations:

1. Value of Honesty. The notion of personal honesty and academic integrity is central to the existence of the MTSU community. Community members will not engage in cheating, plagiarism, or fabrications of any type. All members of the community will strive to achieve and maintain the highest standards of academic achievement.
2. Respect for Diversity. The MTSU community is composed of individuals representing different races, ethnicities, sexual orientations, and cultures. The community embraces and celebrates this diversity as a pillar of its strength.
3. Commitment to the Community. Citizens of the MTSU community will be good stewards of the University's resources and will not engage in conduct which damages or exploits the community.
4. Freedom of Expression. The MTSU community is a marketplace of ideas and opinions. Community members are encouraged to freely communicate their ideas and opinions concerning issues both within and outside the community.

## Student Access to Educational Records

This policy may be found on page 43 of this catalog.

## James E. Walker Library

The James E. Walker Library is an important resource for a quality education. The library offers a beautiful facility for study and a broad collection of books, periodicals, and information databases.

The centrally located facility opened in January 1999, providing expanded resources for student research, inquiry, reading, study, and discussion. The collections of materials and services support course assignments, term papers, general reference, projects, and student research. The facility provides a variety of individual and group study areas as well as 300 computers for accessing both local and international information resources. Special features of the library include group studies, two instruction rooms for learning how to use library resources, Special Collections, and an Adaptive Technologies Center to meet needs of students with disabilities.
Librarians are available to help with reference, research, and information and students are encouraged to ask questions. With their university ID cards, students can access all books, periodicals, and electronic databases in the library collection. Classes and individual instruction sessions are offered on the use of library resources, and research guides are published to provide further information about collections and services.

More information can be found on the library's Web site at www.mtsu.edu/~library.

## Women's Center

The June Anderson Women's Center (JAWC) has been serving women at MTSU since 1977. Support groups, workshops, and programs for women are offered during the academic year. A free legal clinic is open the last Thursday of each month during Fall and Spring semesters. The office, located on the main floor of the James Union Building, Room 206, provides a safe space for women to meet together and organize projects. A resource and referral file includes information on financial aid for women, housing, and community legal, health, and mental health services. Students are invited to attend and to volunteer for Women's Center activities.

During Spring semester, the Women's Center, working collaboratively with the National Women's History Month Committee, sponsors events, programs, and films which bring together the campus and community in a celebration of women's contributions to culture and society. Additional information about the Women's Center's activities or services is available by calling (615) 898-2193 or via the Internet at www.mtsu.edu/~jawc.

## Women's Studies Library

The Women's Studies Program, located in Peck Hall 109B, maintains a collection of materials related to women's and gender studies. Most volumes circulate.


# International Programs and Services 

## International Programs and Services Office Keathley University Center 124

The University provides immigration advisement through the International Programs and Services Office (IPSO). IPSO is responsible for issuing I-20 and DS-2019 documents used for securing visas. IPSO serves as a liaison among faculty members, administrators, and international students. The office caters to a variety of international student needs, including housing, academic matters, community affairs, and programming.

## Admissions

The College of Graduate Studies serves as the admissions office for international students. All inquiries and correspondence should be addressed to this office. Application packets, including forms and requirement instructions, can be obtained by telephoning or writing the college or via http://www.mtsu.edu/~graduate. Also, Graduate Studies evaluates college credits obtained from foreign universities. University catalogs cannot be mailed overseas. Applicants abroad can apply for the Fall and Spring Semesters only. Applicants who are already in the United States and in F1 or J1 status may apply for Summer.

## Residency

IPSO determines residency for international students. All international students will be considered out-of-state for tuition purposes until they apply for and receive in-state status. Those who believe they meet the in-state criteria may obtain an application and submit it to the IPSO office. The completed form and supporting documentation should be submitted one month prior to the term. Failure to file may result in payment of out-of-state tuition. Students will be informed of the residency decision by mail.

## Immigration

It is the student's responsibility to see that he/she is in legal immigration status. All immigration documents should be kept in a safe place. According to U.S. Citizenship and Immigration Services (USCIS), F1 and J1 students must be enrolled
full-time (minimum 12 hours) during Fall and Spring Semesters. Summer enrollment is optional. Also, USCIS requires that F1 and J1 applicants meet all admission requirements prior to enrollment. No conditional enrollment is possible.

## Proof of English Proficiency

An international student must submit a successful Test of English as a Foreign Language (TOEFL) score or University of Michigan English Language Institute (UMELI) test given by the International English Institute in Nashville, Tennessee, before he/she can register at MTSU. Applicants who cannot obtain locally a TOEFL Bulletin of Information for Candidates should write for it well in advance to

Test of English as a Foreign Language
P.O. Box 899

Princeton, New Jersey, U.S.A., 08540
Inquiries concerning the TOEFL program should be directed to
TOEFL Program Director
Educational Testing Service
Princeton, New Jersey, U.S.A., 08540
For information on UMELI testing, contact
International English Institute
1226 16th Avenue, South
Nashville, TN 37212
(615) 327-1715 or 327-1716

## Financial Aid

International students in F1 or J1 status must provide verification of financial support prior to admission as required by the United States Citizenship and Immigration Services (USCIS). There are no academic or need-based scholarships available for nonimmigrant visa holders.

## Deadlines for Completed* Files:

Fall Semester: May 1 of same year; Spring Semester: September 1 of previous year; Summer Semester: February 1 of same year. (Applies to students already in the United States.)
*NOTE: A completed file contains ALL acceptable materials required for admission.

## Orientation Information

All F1 students must attend IPSO orientation before they can register for classes. Information concerning IPSO orientation is sent with the final acceptance letter.

## Health and Accident Insurance

All international students in F1 or J1 status must obtain health and accident insurance as a condition of admission and continued enrollment at MTSU. Minimum requirements for coverage set by the Tennessee Board of Regents are specified on the insurance form provided by IPSO.

## Application to MTSU:

## Nonimmigrants

1. Complete graduate application for admission.
2. Submit $\mathbf{\$ 3 0 . 0 0}$ nonrefundable application fee (money order or check with routing numbers).
3. Submit evidence of freedom from tuberculosis.
4. Submit evidence of two rubeola vaccinations.
5. Submit a financial statement.
6. Submit official TOEFL (computer-based minimum score 195, pa-per-based minimum score 525) or UMELI (minimum score 85). (We do not accept any other than ETS official test scores for the TOEFL.)
7. Submit completed insurance form for F1 and J1 applicants.
8. Submit a front and back copy of 1-94, if applicable.
9. Submit a front and back copy of 1-20 or DS-2019, if applicable.
10. Student must have official transcripts sent from all institution(s) directly to the College of Graduate Studies. If transcripts are written in a foreign language, an official translation in English and an official nontranslated transcript must both be sent. A syllabus of each class may be required in order to receive course substitution credit.
11. Submit official GRE or GMAT score. We can only accept copies if our institution code (1466) is listed as a score recipient.
NOTE: Sending all documents except transcript(s) and test scores in one envelope will expedite processing of the application. If the student does not have a Social Security number, the office will assign a student ID number for record-keeping purposes only. The Social Security number or student ID number should be on all correspondence sent to the office. All materials received become the property of MTSU and cannot be returned to the student or forwarded to a third party.


## Continuing Studies and Public Service

## Rosemary Owens, Dean <br> Cope Administration Building 119

The purpose of the Division of Continuing Studies and Public Service at Middle Tennessee State University is to extend services of the University to adults, individuals, and groups beyond the resident students on campus. The division is divided into two main areas-credit and noncredit. The credit area coordinates distance learning, off-campus courses, summer school, evening classes, and the Regents Online Degree Program. The noncredit area caters to professionals interested in updating skills, groups or organizations desiring some type of educational experience, or persons needing any of the noncredit services outlined below. More information on either of these areas can be obtained by contacting the Division of Continuing Studies and Public Service, (615) 898-2462. Additional information may be obtained by visiting www.mtsu.edu/learn.

## Credit Area

## Distance Learning Courses

Distance learning courses, coordinated through the Division of Continuing Studies and Public Service, include courses via videoconferencing, telecourses, correspondence courses, and online courses.

- Videoconferencing Courses - Videoconferencing courses send the instructor's "live" lectures at MTSU to students at the remote sites. Sites include Spring Hill, Franklin, and Columbia State Community College. The videoconferencing classrooms are equipped with TV monitors and push-to-talk microphones so students and instructors can interact. The instructor will visit the remote sites during the semester to assure that each student will have an opportunity to meet him/her in person. The instructor is also available during office hours at MTSU by phone, e-mail, or in person.
- Telecourses - Telecourses are delivered primarily over cable television. Students are required to attend an orientation and two examinations on campus. Instead of attending lectures on campus, telecourse students watch approximately one hour of programs each week. The telecourses are available on several local channels and in the McWherter Learning Resources Center. Telecourse tapes may also be rented. In addition, students read their texts and study guides and submit assignments as scheduled. Teachers are available at set times for consultation. More information may be obtained by calling (615) 898-5426 or visiting the telecourse home page at www.mtsu.edu/learn/telecourse.
- Correspondence Courses - Correspondence courses involve individual, independent instruction of a student by an instructor on a one-to-one basis. Typically, this entails home study as well as the exchange of materials and evaluations through the mail. Interaction and feedback between correspondence course faculty and students take the form of written assignments, testing, evaluations, guidance, and assistance via such media as telephone, fax, e-mail, and other electronic technologies. More information may be obtained via e-mail at corres@mtsu.edu or by calling (615) 898-5332.
- Online Courses - Online courses are accessed over the Internet through e-mail, newsgroups, distribution lists, and the World Wide Web. Only students with strong experience on the Internet should register for an online course. Students are required to have access to a computer and the Internet. Students must attend at least one proctored examination and must complete assignments. A photo ID must be presented at all exams. All other assignments and quizzes will be available through the Internet. Additional information may be obtained by visiting www.mtsu.edu/online.
More information is available by calling (615) 898-5611. The current schedule book carries course offerings.


## Evening School

The Division of Continuing Studies and Public Service serves students attending MTSU at night by assisting with registration, accepting payment of fees/fines for the Business Office, providing catalogs and schedule books, making IDs, issuing parking permits, and offering other services to students outside regular daytime business hours. More information is available by contacting the Evening School Office, (615) 898-5611.

## Off-campus Program

Credit courses are regularly scheduled at several off-campus locations in middle Tennessee, including Smyrna, Spring Hill, Franklin, and Columbia State Community College. Efforts are made to service any special requests for off-campus credit courses by business and industry, school systems, and agencies.

## Summer School

The Division of Continuing Studies and Public Service directs the summer school, which includes a substantial number of credit courses. Course offerings are available in the current summer schedule book.


## Regents Online Degree Program (RODP)

Middle Tennessee State University and each of the colleges and universities in the Tennessee Board of Regents (TBR) system are working cooperatively to allow students to earn college degrees entirely online. The joint program is called the Regents Online Degree Program (RODP).
The online program currently includes a Bachelor of Science degree with a major in Liberal Studies, a Bachelor of Science degree with a major in Professional Studies and concentrations in Information Technology and Organizational Leadership. Students must earn a minimum of 120 hours; meet MTSU upper-division, residency, and senior hour requirements; meet MTSU General Education requirements; meet MTSU GPA requirements; and complete the courses outlined in the degree program.
Two master's degrees are offered through the Regents Online Degree Program. A Master of Science in Nursing (M.S.N) with concentrations in Nursing Education, Nursing Administration, Nursing Informatics, and Advanced Practice is available. The program requires completion of 32-45 semester credit hours (according to the concentration). A Master of Education in Advanced Studies in Teaching and Learning with a concentration in Childhood Literacy Reading is also offered. The program requires completion of 33 semester credit hours. For more information regarding graduate degree requirements, please refer to the Web site at www.tn.regentsdegrees.org/ campus/mtsu/ or call (615) 898-2840.
Admissions, instruction, advising, library services, and other forms of student assistance are available online. The Regents online courses have been designed to be taught totally online in an interactive, asynchronous format.
Designed especially for adults who already have some college experience, the online degree program is also appropriate for students who have earned or are working on associate's degrees. For more information regarding undergraduate degree requirements, please refer to the Web site at www.tn.regentsdegrees.org/campus/mtsu/ or call (615) 8985611.

## Lifelong Learning

## A World of Opportunities

The division's Lifelong Learning (noncredit) initiative promotes and provides diverse opportunities that enhance the professional and personal lives of middle Tennessee residents. Our diverse educational opportunities, quality programs, and dedicated services give students access to the vast and valuable resources of our University. We go the distance to make lifelong learning a reality for anyone, anywhere, because we believe everyone deserves the opportunity to improve his or her quality of life through higher education. A current course catalog is available by calling (615) 898-2462 or online at www.mtsu.edu/learn/noncredit/index.htm.

## Business

Lifelong Learning serves the business community in the middle Tennessee region by seeking solutions through an educational
environment. We provide numerous opportunities for professional development as an extension of Middle Tennessee State University. Through our business area we conduct such programs as Achieve Global (formerly Zenger-Miller), American Management Association, American Payroll Association, Human Resource (Society of Human Resource Management), Real Estate, Nissan Business Writing Course, and Saturn Landscape Course.

## Government and Education

The government and education area works with all branches of government and establishes programs to enhance the professional development of $\mathrm{K}-12$ educators. Through this avenue we conduct such programs as ACT Preparation, LSAT Preparation, Conversational Spanish I and II, Survival Spanish for Business, Survival Spanish for Construction, Survival Spanish for Law Enforcement, Survival Spanish for Medicine, Sign Language, Beginners Japanese, English as a Second Language, and NCA Cheerleaders.

## Medical and Health Services

This area offers both valuable continuing education for professionals and unique training opportunities for those interested in the health care field. Through our medical and health services area we conduct such programs as Emergency Medical Technician, Massage Therapy, CPR, First Aid, Continuing Education for Health Care Professionals, Nursing CEUs, Massage Therapy Intern Clinic, Athletic Training Assistants, and Survival Spanish for Health Care Professionals.

## Recreation and Leisure

Through recreation and leisure we conduct such programs as Introduction to Fly Tying, Landscape Design, Ballroom Dancing, Feng Shui in the Home, Riding and Street Skills (for beginners), the Experienced Motorcycle Rider Course (for experienced riders), and the Tennessee Walking Horse Camp.

## Technology

In this area we conduct such programs as Linux/UNIX Fundamentals, Linux/UNIX System Administration and Tools, A+ Certification, Network+ Certification, Computer-Based Training Courses, Certificate in Computer Technology, Web Publisher Certification, Education To Go, and MOS Testing.

## Workforce Development and Corporate Training

The noncredit area offers various human resource services for business, industry, and government, including customized onsite training, needs assessments, and specialized workforce analysis. Current programs include team building, customer service, leadership, supervision, written and interpersonal communication, and language training.
Professional development certification programs, seminars, workshops, and short courses that focus on timely and lead-ing-edge topics are presented on and off campus. Current client groups include human resource managers, municipal clerks, engineers, lawyers, accountants, cosmetologists, emergency medical technicians, government officers, payroll administrators, and physician groups. Inquiries should be directed to Lifelong Learning at (615) 898-2462.

## COLLEGE OF GRADUATE STUDIES

The Graduate School was established in 1951 in recognition of the importance graduate instruction had attained at M iddle Tennessee State University. As graduate education continued to grow and develop at the University, the Graduate School was renamed the College of Graduate Studies in 1991 to signify the academic status of the college. All graduate degrees at the University are awarded by the College of Graduate Studies, under the auspices of the dean of the College of Graduate Studies.

The mission of the College of Graduate Studies is to provide academic, financial, and other support services for graduate students, while upholding academic standards. The college certifies that every candidate for conferral of a graduate degree has fulfilled all academic requirements. The college contributes assistance to help ensure that each graduate program provides the optimal educational experiences for its graduate students. This support includes the distribution of graduate assistant funds and the provision of graduate fellowships. The college also serves as the central collegiate component for uniting the entire graduate academic community at MTSU. The college, in consultation with the faculty, establishes policies and procedures to promote excellence in graduate education. These include processes to ensure judicious and selective graduate student admission decisions; rigorous adherence to the academic standards expected of graduate students; monitoring for excellence in graduate program curricula via the graduate program review process; and selectivity in making graduate faculty appointments. This latter graduate faculty standard enhances the opportunities for graduate students to receive optimal intellectual challenges and quality research mentoring during the course of their graduate experiences at MTSU. The importance of scholarly research in graduate education is exemplified by the fact that the College of Graduate Studies, in consultation with the Faculty Research and Creative Activity Committee, selects recipients for faculty research grants.

# Graduate Student Bill of Rights and Responsibilities 

The Graduate Council and the College of Graduate Studies have approved in principle the document Graduate Student Bill of Rights and Responsibilities.

## Rights

1. Graduate students have a right to be respected as individuals of merit and as junior colleagues of faculty. The student's vulnerability must not be exploited in any way by faculty, administration, or staff. (Reference: Faculty Handbook, Ethics Guidelines, Section IV, I.B., I.C.2, page 2)
2. Graduate students have a right to an accurate and timely description of the availability and the likelihood of financial and resource support within their program and within the University and will be given an equal opportunity to compete for support for which they are eligible.
a. Prospective and currently enrolled graduate students should be provided a thorough description of the requirements and qualifications necessary for holding teaching assistantships and graduate assistantships and receiving financial support from the University.
b. Prospective and currently enrolled graduate students should be provided a thorough description of the requirements and qualifications for all academic and financial awards in their program and in the Graduate Catalog. They are to be assured that competition for any and all academic awards will be available to eligible graduate students and that evaluation for such awards will be fair and objective. They also should be informed of the procedures for evaluating applicants.
3. Graduate students have a right to be informed of specific requirements for achieving an advanced degree. Each department should communicate clearly these requirements to its students, and it should notify currently enrolled students in writing of any changes. Prospective and currently enrolled graduate students have a right to know of the normal time to complete a degree within a specific graduate program.
4. Graduate students have a right to a nonbiased evaluation of their progress toward achieving an advanced degree (Constitution of the Student Government Association, Art. II Sec. 3). The criteria should be clearly understood by the graduate advisor and student.
5. If a graduate student requests an explanation, reasons for unsatisfactory performance on qualifying or comprehensive examinations should be given in writing.
6. Graduate students have a right to substantive feedback and regular guidance concerning their academic performance.
a. Graduate students and their thesis/dissertation directors should arrive at and maintain a mutually
agreeable schedule of evaluative/supervisory conferences.
b. Graduate students must be notified in writing of unsatisfactory performance before any attempt is begun to dismiss them from a graduate program. Only the dean of the College of Graduate Studies can dismiss a student from a graduate program for academic reasons and normally only upon the recommendation of the program. Graduate students have the right to appeal for cause any decision affecting their academic standing as a graduate student. Cause excludes grade appeals, which are under the purview of the MTSU Grade Appeals Committee. The burden of responsibility rests with the appellant to provide a timely, cogent, and convincing written documentation of the facts upon which the appeal is based. Further information may be obtained from the appeals document from the Graduate Council, Section III.
7. Graduate students have a right to freedom from unlawful discrimination in any actions, including those based on gender, race, age, sexual orientation, disability, and religious or political beliefs. (Constitution of the Student Government Association, Art. II Sec. 1.2.6; MTSU Policies and Procedures Manual III:00:09, IV: 07:06, IV:07:16:i). University grievance procedures should be available upon request at the Graduate College. Opportunities for informal resolution should also be explained to the student when appropriate.
8. Graduate students have a right to reasonable confidentiality in their communications with professors. (Constitution of the Student Government Association, Art. II Sec. 4; MTSU Policies and Procedures Manual II:02:00)
a. In general, a student's performance or behavior should not be discussed by a professor with other students.
b. Discussion among faculty of a student's performance should be of a professional nature and should be limited to the student's academic performance and fitness as a graduate student: the substance of the communication should be based on need-to-know, relevant information.
9. Graduate students have a right to refuse to perform tasks if those tasks are not closely related to their academic or professional development.
10. Graduate students have a right to receive fair recognition for their efforts and contributions to cooperative research projects, including co-authorship of publications. Efforts and recognition should be determined prior to the project whenever possible.
11. Graduate students should be represented in the deci-sion-making process relative to graduate issues in their departments and programs; however, the representation is program specific, possibly taking many different forms.

Graduate students should have the opportunity annually to evaluate their professors in writing without fear of retribution.
12. Graduate students have a right to review vitae of faculty members within their degree programs/departments who are qualified/eligible to serve on their graduate committees. These vitae should be made available at the time the students are accepted into their programs to aid them in selecting their committee members.

## Responsibilities

1. Graduate students have a responsibility to read and become familiar with the Graduate Catalog and the Student Rights and Responsibilities booklet.
2. Graduate students have a responsibility to complete and submit all documents required for admission to the College of Graduate Studies and to their departments.
3. Graduate students have a responsibility to conduct themselves in all academic activities in a manner befitting the professorate. Graduate students' behavior should be a credit to themselves, the degree program/department, and the University. (Student Rights and Responsibilities booklet)
4. Graduate students have a responsibility to devote appropriate time and energy toward achieving the advanced degree within a reasonable time frame as specified by their graduate programs.
5. Graduate students have a responsibility to uphold ethical norms and honesty in research methodology and scholarship. (Student Rights and Responsibilities booklet; MTSU Policies and Procedures Manual I:01:24; "A Statement of Graduate Students' Research Rights and Responsibilities at MTSU's Jennings A. Jones College of Business")
6. Graduate students have a responsibility to communicate regularly with faculty members and advisors, especially in matters related to research and progress within the graduate program.
7. Graduate students are encouraged to participate in the campus community to the extent that they are able and to enrich the campus in whatever ways possible, including contributing to the following:
a. the academic development and the social environment of the department in which they are pursuing the advanced degree and
b. decision making relative to graduate student issues in the department, student government, and university.

## Graduate Minors

Minors are offered in the following areas:
Accounting
Aerospace
Agriculture
Art
Biology
Business Education
Chemistry
Computer Science
Criminal Justice Administration
Curriculum and Instruction
Earth Science/Geology
Economics
Education
English
Foreign Languages
Geography
Gerontology
Health
History
Human Sciences
Industrial Studies
Information Systems
Library Science
Mass Communication
Mathematics
Music
Physical Education
Physics
Political Science
Psychology
Reading
Recreation
Safety
Sociology
Special Education
Speech and Theatre
Vocational-Technical Education
There are three patterns of minors from which a candidate must choose:

1. A single minor consisting of at least 12 semester hours; 12 undergraduate hours in an area are prerequisite to a single minor in that area at the master's level.
2. A minor consisting of a minimum of 6 semester hours in each of two subjects.
3. The distributive minor consisting of a minimum of 12 semester hours in at least three subjects.
The candidate is expected to complete the total program in the major, minor, and/or cognate fields. A cognate is defined as 6 semester hours.

## Graduate Minors

Minors are offered in the following areas:
Accounting
Aerospace
Agriculture
Art
Biology
Business Education
Chemistry
Computer Science
Criminal Justice Administration
Curriculum and Instruction
Earth Science/Geology
Economics
Education
English
Foreign Languages
Geography
Gerontology
Health
History
Human Sciences
Industrial Studies
Information Systems
Library Science
Mass Communication
Mathematics
Music
Physical Education
Physics
Political Science
Psychology
Reading
Recreation
Safety
Sociology
Special Education
Speech and Theatre
Vocational-Technical Education
There are three patterns of minors from which a candidate must choose:

1. A single minor consisting of at least 12 semester hours; 12 undergraduate hours in an area are prerequisite to a single minor in that area at the master's level.
2. A minor consisting of a minimum of 6 semester hours in each of two subjects.
3. The distributive minor consisting of a minimum of 12 semester hours in at least three subjects.
The candidate is expected to complete the total program in the major, minor, and/or cognate fields. A cognate is defined as 6 semester hours.

## Graduate Program Information

| Major/Program | Degree Offered | Concentration | Required Letters of Reference | Required Test* |
| :---: | :---: | :---: | :---: | :---: |
| College of Graduate Studies, (615) 898-2840 |  |  |  |  |
| Non-Degree Seeking | None |  |  |  |
| Gerontology, p. 55 | Grad. Certificate |  |  |  |
| Health Care Management, p. 55 | Grad. Certificate |  |  |  |
| Accounting Department, (615) 898-2558, p. 58 |  |  |  |  |
| Accounting/Information Systems | M.S. | Accounting (as primary field) |  | $\begin{aligned} & \text { GPA } \times 200+\text { GMAT }=950 \\ & \text { UDGPA } \times 200+\text { GMAT }=1000 \end{aligned}$ |
| Aerospace Department, (615) 898-2788, p. 60 |  |  |  |  |
| Aerospace Education | M.Ed. |  | 3 | GRE or MAT |
| Aviation Administration | M.S. | Airline/Airport Management | 3 | GRE or MAT |
|  | M.S. | Aviation Asset Management | 3 | GRE or MAT |

Art Department, (615) 898-2455, p. 64
Art Education

| Biology Department, (615) 898-2847, p. 66 |
| :--- |
| Biology |


| Biology | M.S. |  | GRE or MAT |  |
| :---: | :---: | :---: | :---: | :---: |
| BMOM Department, (615) 898-2902, p. 70 |  |  |  |  |
| Business Education | M.B.E. |  | 3 | GRE or MAT |
| Jennings A. Jones College of Business, (615) 898-2964, p. 69 |  |  |  |  |
| Business Administration | M.B.A. |  |  | GPA $\times 200+$ GMAT $=950$ <br> UDGPA $\times 200+$ GMAT $=1000$ |
| Chemistry Department, (615) 898-2956, p. 73 |  |  |  |  |
| Chemistry | M.S. |  |  | GRE |
| Chemistry | D.A. |  |  | GRE |
| Computer Information Systems Department, (615) 898-2362, p. 76 |  |  |  |  |
| Accounting/Information Systems | M.S. | Information Systems (as primary field) |  | $\begin{aligned} & \text { GPA } \times 200+\text { GMAT }=950 \\ & \text { UDGPA } \times 200+\text { GMAT }=1000 \end{aligned}$ |
| Computer Science Department, (615) 898-2397, p. 79 |  |  |  |  |
| Computer Science | M.S. |  |  | GRE |

Criminal Justice Administration Department, (615) 898-2630, p. 81
Criminal Justice Administration M.C.J. GRE or MAT

Tennessee Center for the Study and Treatment of Dyslexia, (615) 898-5642, p. 55
Dyslexic Studies Grad. Certificate

Economics and Finance Department, (615) 898-2520, p. 83

| Economics | M.A. | GRE or MAT |  |
| :--- | :--- | :--- | :--- |
| Economics | M.A. | Industrial Relations | GRE or MAT |
| Economics | M.A. | Financial Economics | GRE or MAT |
| Economics | Ph.D. |  | GRE |

[^0]| Major/Program | Degree Offered | Concentration | Required Letters of Reference | Required Test* |
| :---: | :---: | :---: | :---: | :---: |
| Educational Leadership Department, (615) 898-2855, p. 90 |  |  |  |  |
| Administration and Supervision | M.Ed. |  | 3 | GRE or MAT |
| Administration and Supervision | Ed.S. |  | 3 | GRE or MAT |
| Administration and Supervision | M.Ed. | Library Science | 3 | GRE or MAT |
| Curriculum and Instruction | M.Ed. | English as a Second Language | 3 | GRE or MAT or NTE |
| Curriculum and Instruction | Ed.S. |  | 3 | GRE or MAT |
| Elementary and Special Education Department, (615) 898-2680, p. 96 |  |  |  |  |
| Reading | M.Ed. |  |  | GRE or MAT or NTE |
| Curriculum and Instruction | M.Ed. | Early Childhood |  | GRE or MAT or NTE |
| Curriculum and Instruction | M.Ed. | Elementary School Education |  | GRE or MAT or NTE |
| Curriculum and Instruction | Ed.S. | Elementary School Education |  | GRE or MAT |
| Curriculum and Instruction | M.Ed. | Middle School Education |  | GRE or MAT or NTE |
| Special Education | M.Ed. | Mildly/Moderately Disabled |  | GRE or MAT or NTE |
| Special Education | M.Ed. | Preschool Disabled |  | GRE or MAT or NTE |
| Special Education | M.Ed. | Severely/Profoundly Disabled |  | GRE or MAT or NTE |
| Special Education | M.Ed. | Vision Disabilities |  | GRE or MAT or NTE |
| Adv. Studies in Teaching and Learning (RODP) | M.Ed. | Childhood Literacy Reading |  |  |

Engineering Technology and Industrial Studies Department, (615) 898-2776, p. 104

| Engineering Technology and Industrial Studies | M.S | Engineering Technology | GRE |
| :--- | :--- | :--- | :--- |
| Engineering Technology and Industrial Studies | M.S. | Industrial Relations | GRE |
| Engineering Technology and Industrial Studies | M.S. | Occupational Health and Safety | GRE |

English Department, (615) 898-2573, p. 108

| English | M.A. | 3 |
| :--- | :--- | :--- |
| English | Ph.D. | 3 | GRE*** $^{\text {GRE*** }}$

Foreign Languages and Literatures Department, (615) 898-2981, p. 112

| Foreign Languages | M.A.T. | French | GRE |
| :--- | :--- | :--- | :--- |
| Foreign Languages | M.A.T. | Spanish | GRE |
| Foreign Languages | M.A.T. | German | GRE |

Geosciences, (615) 898-2726, p. 115
Geoscience Grad. Certificate

HPERS Department, (615) 898-2811, p. 117

| Health, Physical Education, Recreation | M.S. | Health | GRE or MAT |
| :--- | :--- | :--- | :--- |
| Health, Physical Education, Recreation | M.S. | Physical Education | 3 |
| Health, Physical Education, Recreation | M.S. | Recreation | GRE or MAT |
| Health, Physical Education, Recreation | M.S. | Sport Management | GRE or MAT |
| Exercise Science and Health Promotion | M.S. |  | 3 |
| Human Performance | Ph.D. |  | 3 |
| GRE or MAT |  |  |  |
| GRE or MAT |  |  |  |


| History Department, (615) 898-2536, p. 126 |  |  |  |
| :--- | :--- | :--- | :--- |
| History | M.A. |  | 3 |
| History | M.A. | Public History | 3 |
| History | D.A.§ |  | 3 |
| History | D.A.§ | Historic Preservation | GRE |
| GRE |  |  |  |

§D.A. is being phased out; proposal for Ph.D. in Public History pending

| Human Sciences Department, (615) | $\mathbf{8 9 8 - 2 8 8 4}, \mathbf{p . 1 3 3}$ |  |  |
| :--- | :--- | :--- | :--- |
| Human Sciences M.S. Nutrition and Food Science <br> Human Sciences   | M.S. | GRE or MAT <br> Child Development and Family Studies | 3 |

[^1]| Major | Degree Offered | Concentration | Required Letters of Reference | Required Test* |
| :---: | :---: | :---: | :---: | :---: |
| Mathematical Sciences Department, (615) 898-2669, p. 140 |  |  |  |  |
| Mathematics | M.S. | General Mathematics | 3 | GRE or MAT |
| Mathematics | M.S. | Industrial Mathematics | 3 | GRE or MAT |
| Mathematics | M.S. | Research Preparation | 3 | GRE or MAT |
| Mathematics | M.S.T. | Middle Grade Mathematics | 3 | GRE or MAT |
| Mathematics | M.S.T. | Secondary Mathematics | 3 | GRE or MAT |

Robert W. McLean School of Music, (615) 898-2469, p. 145

| Music | M.A. |  | 3 | GRE |
| :---: | :---: | :---: | :---: | :---: |
| School of Nursing, (615) 898-2437, p. 151 |  |  |  |  |
| Critical Care Nursing | Grad. Certificate |  |  |  |
| Nursing Informatics | Grad. Certificate |  |  |  |
| Nursing (RODP) | M.S.N. | Nursing Education Nursing Administration Nursing Informatics Advanced Practice |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Psychology Department**, (615) 898-2706, p. 155 |  |  |  |  |
| Psychology | M.A. | Clinical**** | 3 | GRE and psy. subject exam |
| Psychology | M.A. | Experimental | 3 | GRE |
| Psychology | M.A. | Industrial/Organizational | 3 | GRE quantitative/analytical |
| Psychology | M.A. | Pre-Spec.-Ed.: Sch. Psy. | 3 | GRE |
| Psychology | M.A. | Quantitative | 3 | GRE |
| School Counseling | M.Ed. |  | 3 | GRE |
| Curriculum and Instruction | Ed.S. | School Psychology | 3 | GRE |

Sociology and Anthropology Department, (615) 898-2508, p. 167
Sociology M.A. 3 GRE
Following are degree programs offered in cooperation with the Tennessee Board of Regents. For additional information about the Regents Online Degree Program (RODP), see page 18.
Regents Online Degree Program, (615) 898-2840

| Adv. Studies in Teaching and Learning | M.Ed. | Childhood Literacy Reading |
| :--- | :--- | :--- |
| Nursing | M.S.N. | Nursing Education |
|  |  | Nursing Administration |
|  |  | Advanced Practics |
|  |  |  |

*See page 27 for University admissions requirements and the section under the relevant program.
**See Department of Psychology section regarding grade point average requirements
***GRE scores $=$ two of the following: verbal, analytical, subject
****The Clinical Psychology Program requires a supplementary application. Please contact the Psychology Department.

## Glossary of Terms

Admission to degree status-Admission to the College of Graduate Studies as a graduate student for the purpose of seeking a graduate degree. This status requires completing a graduate admission application; meeting all entrance and test requirements; transmittal of relevant official transcripts; approval by the graduate program/department; and approval by the College of Graduate Studies.
NOTE: Some graduate programs allow applicants to begin taking classes prior to an admission decision whereas others prohibit such enrollment. An applicant should seek information from the relevant graduate program about its policy.

Admission to non-degree status-Admission to the College of Graduate Studies as a post-baccalaureate student for the purpose of officially taking graduate courses. This status requires completing a graduate admission application; transmitting relevant official transcripts; and approval by the College of Graduate Studies. Not all graduate courses are open to non-degree students; thus the student should consult with the departmental graduate advisor(s).

Advancement to Candidacy-Status of the student who has successfully completed a substantial portion of the curriculum (and relevant examinations) and, in consultation with the graduate advisor, has established a curricular plan to be followed for the purpose of graduation. An Advancement to Candidacy Form must be approved by the pertinent graduate program personnel (e.g., major professor, graduate advisor, etc.), and the dean of the College of Graduate Studies (or designee). The form specifies the courses which the student is required to take to complete the curricular requirements. This form must be filed and approved prior to completion of 24 credit hours (or earlier if required by the graduate program).

Cognate—Six semester hours of related coursework.
Comprehensive examination-An examination given to master's and specialist's students, generally during the last semester of coursework. The examination may be oral, written, or a combination of both modes. It may be taken no more than twice. The purpose of this examination is to assess the candidate's knowledge of a broad academic field and to evaluate whether the candidate has attained certain standards and/or requirements necessary to successfully complete the program. If the examinations are written, they are to be kept on file in the department. The student has the right of access to his or her graded exam for a period of five (5) years. (Doctoral students, please see qualifying examination.)

Concentration-A curricular component of a graduate program representing a well-recognized subset or branch of the discipline. A concentration appears on the student's graduate transcript.

Conditional admission-The granting of temporary admission into a graduate program with certain stipulations being placed upon the student. Continuation in the program as a degree-seeking student is contingent upon fulfilling specific requirements described in the conditional admission letter.

Encumbrance-A hold placed on registration (or transcripts). For example, a registration encumbrance will be placed on all non-admitted degree-seeking applicants having graduate status and who reach a maximum of 12 credit hours or two $(2)$ semesters, or earlier if required by the graduate program.

Full-time/part-time graduate status—See student load, page 41.

Graduate advisor-A faculty member appointed by the department and approved by the College of Graduate Studies to advise graduate students and provide curricular planning counseling. Graduate students should consult with their graduate advisors prior to or immediately upon being admitted to a graduate program. A list of graduate advisors may be obtained at the College of Graduate Studies or the relevant department.

Graduate coordinator or graduate director-A faculty member appointed to serve as the principal officer of the graduate program with respect to curricular and other relevant matters. The department chair often, but not always, serves as the graduate director.

Graduate status-Status whereby a post-baccalaureate student is declared eligible to enroll in graduate courses at MTSU. The granting of graduate status does not necessarily mean that one has been admitted to a graduate program. (Also see encumbrance and admission.)

Graduation requirements-Those academic and other requirements necessary for successful completion in order to be eligible for receipt of the degree. In general, the requirements in existence at the time of matriculation are those which must be fulfilled. These requirements are listed in the graduate catalog of that year. Changes in a graduate curriculum may occur while a student is enrolled. If so, the student will have the option of fulfilling the new requirements or following the original plan in existence at the time of matriculation. This is subject to "stop-out" limitations and course availability. (See stop-out.)

Intent to graduate-Indication that the candidate is planning to complete all degree requirements during the current term. An Intent to Graduate Form must be filed by the candidate by the second week of the semester of planned graduation or by the end of the first week of Summer Session II (for August graduation). This authorizes release of the student's file for final evaluation and authorizes information to be collected for issuance of the diploma.

Major-A field of study representing a well-recognized discipline in which there is offered a graduate program. A major appears on the student's graduate transcript.

Major professor-The faculty member providing the primary scholarly research mentorship to the graduate student. The major professor serves as the director or chair of the thesis or dissertation committee.

Matriculation-The first semester of enrollment after admission to a graduate program.

Minor-A free-standing curricular component of a graduate program representing an academic discipline. This designation verifies that scholarly expertise in the minor field has been achieved in addition to that attained in the major discipline.

Plagiarism—The use or reproduction of material from another person's work (e.g., publications, productions, or intellectual property) without revealing the source and/or clearly acknowledging the degree of dependency. If materials are reproduced verbatim from another source, or even reproduced in large part with only minor modification, proper citation must occur. To avoid allegations of plagiarism, clearly cite the source and use quotations marks to identify the excerpts, or clearly acknowledge the source by indenting and single-spacing the reproduced selections.

Qualifying examination-An examination given to doctoral students to assess the level of mastery of knowledge in the discipline. This examination determines if the doctoral student is qualified to continue as a candidate for the doctoral degree. Written portions of the examination are to be kept on file in the department for a period of five (5) years and the student has the right of access. The examination is a milestone in academic achievement by a doctoral student. (Master's and specialist's students, please see comprehensive examination.)

Readmission and reenrollment-Applications which must be filed if a graduate student breaks continuous graduate enrollment. If granted, the student may reenroll for the identified term. Readmission for non-degree-seeking students is fairly routine. However, readmission for degree-seeking students is not guaranteed. The department should be consulted for its readmission policy.

Repeat policy-The number of graduate courses possible for repetition for the purpose of grade replacement is limited to two. These two courses may not exceed 8 credit hours.

Satisfactory progress-Successful advancement of a student toward his/her degree objective in the judgment of the faculty and dean of the College of Graduate Studies. To be deemed as making satisfactory progress, a graduate student must maintain a cumulative GPA of 3.00 or greater and must successfully complete sufficient and appropriate graduate courses. These graduate courses must apply toward the graduate curriculum in a manner consistent with completion of the degree objective within the established time limit.

70/30 Rule—A curricular stipulation for master's degree candidates specifying that no more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours. Candidates with more than 30 percent of the degree program dually listed as undergraduate/graduate hours cannot graduate until the balance is attained. Normally, no more than 3 credits of thesis research (course 6640) will be applied toward the minimum degree hour requirement. Careful curricular planning in consultation with the graduate advisor is essential.

Specialization-A curricular component of a graduate program representing a well-recognized subset or branch of the discipline. A specialization does not appear on the student's graduate transcript.

Stop-out-The period of time during which a student fails to register for successive academic sessions. If the stop-out period exceeds one academic year, the readmitted student may be required to fulfill degree requirements in existence at the time of readmission, rather than those in place at the original matriculation.

Time limits-The time elapsed from matriculation during which a student is required to complete the degree objective. Master's and specialist's students have six years from matriculation. Doctoral students have ten years from matriculation. These time limits are subject to extension but only for compelling reasons. If an extension is to be granted, it must be supported by the graduate program and approved by the dean of the College of Graduate Studies.

Transfer credit-Coursework taken at other colleges and universities which is formally transferred to the MTSU graduate record. In general, only coursework taken while in graduate status prior to attending MTSU will be transferred and only if those courses were not used in partial satisfaction of degree requirements at the previous university. Transfer credit requires the approval of the graduate advisor and the dean of the College of Graduate Studies.


# Admission to the College of Graduate Studies 

The University welcomes applications from individuals qualified for graduate study. Applications for admission may be obtained from the Graduate Office, Cope Administration Building 114, or from this catalog. You may also apply online on our Web site (www.mtsu.edu/ ~graduate). In accepting admission to the College of Graduate Studies, a graduate student assumes responsibility for knowing and complying with the regulations and procedures set forth in this catalog, as well as any amendments or revisions which may ensue.
Graduate applicants must have earned a bachelor's degree. Exceptions are those seeking Ed.S. degrees and some doctoral programs which require a prior master's degree. However, under certain conditions undergraduate seniors with 98 semester hours of credit may be eligible to take graduate coursework. (See the section on Graduate Courses below.)

Applicants admitted to graduate programs as degreeseeking students are those working toward a graduate degree. Degree-seeking students must be recommended for admission by the graduate program/department and approved by the dean of the College of Graduate Studies.
Students not seeking a degree are classified as non-degree students. Non-degree-seeking students must be admitted to the College of Graduate Studies. Non-degree-seeking students may take courses for a reasonable period of time, as determined by the dean of the College of Graduate Studies.
NOTE: Non-degree-seeking students are not permitted to enroll in graduate courses in the Jennings A. Jones College of Business.
All applicants to the College of Graduate Studies must have an overall undergraduate grade point average (GPA) of 2.75 (on a 4.00 scale) to be considered for unconditional admission. (Also see conditional admission.) Applicants who attended graduate school at another institution must have a minimum cumulative GPA of 3.00 on all graduate work and a minimum of 2.75 on all undergraduate work to be considered for unconditional admission. International students on an F1 visa must meet requirements for unconditional admission.

## Admission as a Degree-Seeking Student

All applicants wishing to pursue a graduate degree objective at MTSU must formally apply for admission to the College of Graduate Studies as degree-seeking students. At least four
weeks prior to the anticipated date of registration, all de-gree-seeking applicants must submit the following materials to the Graduate Office:

1. an application for admission;
2. an application fee;
3. official transcripts certifying coursework from each college or university attended. Official transcripts must be mailed directly from the institution to MTSU and must be received prior to completion of the first semester of enrollment except for the M.B.A. and the M.S. in Accounting/Information Systems, for which all transcripts must be received prior to enrollment.
a. If the applicant obtained the bachelor's degree at MTSU, only transcripts of work not posted on the MTSU transcript will be required.
b. If the applicant obtained the bachelor's degree at another institution, that latter transcript is required. Transcripts of work not posted on the baccalaureate transcript are also required. All postbaccalaureate transcripts are also required.
c. If the applicant earned a graduate degree at another institution, that latter transcript is also required. Transcripts of all postbaccalaureate work not appearing on the graduate transcript are also required;
4. letters of reference, if required by the graduate program. Please refer to the relevant graduate program information found on page 22 of this catalog;
5. satisfactory scores on the Graduate Record Examination (GRE), Miller Analogies Test (MAT), or Graduate Management Admissions Test (GMAT) tests. The GRE, MAT, or GMAT result is used in the evaluation of the academic qualifications of all graduate applicants. Each graduate program has identified a minimum combined GRE or MAT score (GMAT excepted) that it considers indicative of potential for a high level of academic performance. However, admission decisions will be based on the overall academic record of the applicant (particularly in comparison with other applicants being accepted into the program), as well as other relevant materials such as letters of recommendation.
NOTE: Both ETS and the GRE Board have advised that a combined GRE score should not be used as an absolute cutoff for admissions decisions but rather should be used as part of an overall evaluation of applicants. The CRE Board statement reads: "A cutoff score based only on GRE scores should never be used as a sole criterion for denial of admission." The College of Graduate Studies subscribes to this principle.
6. all international applicants must have a 195 computerbased minimum score or 525 paper-based minimum score on the Test of English as a Foreign Language (TOEFL) or 85 on the University of Michigan English Proficiency Exam (UMELI);
7. international applicants on $F$ and J visas must provide verification of financial support prior to admission as required by the United States Immigration and Naturalization Service. Further information may be obtained from the International Programs and Services Office.

Each graduate program may have additional requirements including application deadlines. Applicants should refer to page 22 of this catalog, peruse the graduate program description in this catalog, and/or contact the graduate advisor in the relevant department for specific requirements.
An applicant not meeting University or program requirements for admission as a degree-seeking student may appeal to the individual department for special consideration. If recommended for admission by the department, the dean of the College of Graduate Studies has final approval or denial authority.

## Admission as a Non-Degree Student

Admission to some graduate courses is made available to qualified applicants who wish to enhance their postbaccalaureate education, yet who do not seek a graduate degree. Applicants wishing to be admitted as non-degree graduate students must:

1. complete an application for graduate admission;
2. pay an application fee;
3. submit an official transcript certifying receipt of the bachelor's or postbaccalaureate degree.

International students on an F1 visa may not be admitted to graduate study as non-degree students.
Not all courses offered at the University are available for nondegree students. Information concerning eligibility for specific graduate courses may be obtained from individual departments.
NOTE: Non-degree-seeking students are not permitted to enroll in graduate courses in the Jennings A. Jones College of Business.
Non-degree-seeking students who wish to change to degreeseeking status must meet Graduate Studies' admission requirements and specific graduate program admission requirements to be eligible for consideration.
If transfer to degree-seeking status is approved, appropriate semester hours earned while a non-degree student may be applied toward a degree program if approved by the graduate advisor and the dean of the College of Graduate Studies.

## Conditional Admission

Occasionally degree-seeking applicants may not meet all the requirements necessary to be recommended for unconditional admission. For example, they may have low undergraduate GPAs, lack some prerequisite courses, have low test scores, etc. However, the overall application materials may suggest there is substantial potential for academic success, thus making outright denial counterproductive. In these cases, temporary conditional admission into a graduate program may be granted by the dean of the College of Graduate Studies
upon the recommendation of the graduate advisor. Continuation in the program as a degree-seeking student is contingent upon fulfilling specific requirements stipulated in the conditional admission letter. In order for a student to continue in the program, the written conditions must be completed within one year after matriculation. A registration hold will be placed on the student for the applicable term to ensure that the stated conditions are fully met.

## Admission of MTSU Faculty Members and/or Administrators

Members of the faculty and/or administration of MTSU are eligible for admission to the College of Graduate Studies just as any other applicant. They may not take over 6 semester hours of coursework during any semester. Faculty at the rank of assistant professor or higher or administrators of equivalent ranks may not be admitted to the doctoral program. If instructors who are in the doctoral program are appointed to assistant professor rank, they must discontinue the doctoral program.

## Graduate Courses

Ordinarily only graduate students should register for courses numbered 5000 or above. However, any MTSU undergraduate student having completed 98 semester hours of undergraduate credit is eligible to take graduate courses. Students in Business Administration, Accounting, and Information Systems are not eligible.
Undergraduate students wishing to take graduate courses must obtain permission from the graduate program and the Office of Graduate Studies, CAB 114. Permission is not guaranteed. Not all graduate courses are offered to undergraduate students.
Students may not enroll in 7000-level courses in the Departments of Elementary and Special Education and Educational Leadership unless they are seeking an Education Specialist or doctoral degree. Non-degree-seeking students are not permitted to enroll in 7000-level courses.

## Readmission (Reenrollment)

The Graduate Office should be contacted for all matters concerning readmission, and applications may be obtained there. You may also reapply online on our Web site (www.mtsu.edu/ $\sim$ graduate). A readmission application is required from any student who missed one or more semesters, regardless of the reason for the "stop-out." (See glossary.)
For non-degree-seeking postbaccalaureate students, readmission is generally routine and is granted by the dean of the College of Graduate Studies, but it is not guaranteed.

For degree-seeking-students, readmission is not guaranteed. Each graduate program may have a specific readmission policy and should be contacted for information. Readmission requires the recommendation of the graduate program and
approval by the dean of the College of Graduate Studies. Some graduate programs regularly allow readmission if the "stop-out" period is no more than one year; others are more restrictive.

## Reenrollment Following Suspension

Readmission of a suspended graduate student is not guaranteed. If readmission is granted to a suspended student, reenrollment cannot occur until at least one term (exclusive of summer) has gone by.

## Auditing Courses

An auditor is one who enrolls and participates in a course without expecting to receive academic credit. The same registration procedure is followed and the same fees charged as for courses taken for credit. An audited course is not applicable to any degree or certificate.
Regular class attendance is expected of an auditor. Students interested in auditing a course should discuss course requirements with the instructor, prior to enrolling. Failure to meet course requirements may result in an auditor being removed from the course at the request of the instructor. A successful audit will be recorded on the transcript with the designation NC. Any petition to change from audit to credit or credit to audit must be processed by the last day to add a class. Requests to change from credit to audit after the deadlines must be approved by the dean, College of Graduate Studies.

## Hours after the Master's Degree

The Tennessee Board of Education has ruled that teachers may count any graduate work received after the master's degree toward the next pay raise, per current guidelines. No credit will be given for repeated work. The student must request the Office of Teacher Licensure to send proper credentials to the State Department of Education and/or to the applicable local officials.

## Registration

The schedule book contains information concerning registration procedures.

## Student Identification Cards

All students should have a permanent ID card with a magnetic strip on the back. The card is required for a variety of services on campus including cashing checks, admission to athletic and special events, admittance to the Recreation Center, checking out library materials, obtaining meal tickets, and using RAIDER FUND\$. The ID card will be validated automatically when all fees are paid. All students must have an ID card.

The first card is issued at no charge; however, there is a $\$ 10$ charge for replacing lost or stolen IDs. If the card breaks or is damaged, it should be returned to the ID office and a new card will be issued at no charge.

## Measles Immunization

The State of Tennessee requires students entering colleges, universities, and technical institutes with enrollment of greater than 200 students to provide proof of two (2) doses of measles, mumps, and rubella (MMR) vaccine on or after the first birthday, or proof of immunity to measles if date of birth is 1957 or after.
Students will not be allowed to register for classes until an acceptable form is on file in the Student Health Services Office. More information may be obtained by calling 8982988.

## Catalog

This catalog is produced for the convenience and benefit of graduate applicants and enrollees and is revised every two years. In the interim period, changes in University and/or graduate program requirements may be approved which apply to new applicants or admittees (see page 6 for additional information). Thus the information contained herein should not be construed as binding or inferred as an academic contract. New graduate students should request a copy of graduate program requirements in existence at the time of matriculation. These will be the requirements which must be fulfilled to obtain the degree. Notwithstanding, should graduate requirements change while a student is still enrolled, he/ she will have the choice of opting for the new requirements or following the original plan in existence at matriculation, subject to any necessary substitutions.


## Expenses

The question of costs while attending the University is important to every student. It is difficult, however, to accurately estimate yearly expenditures; expenses vary according to the nature of the curriculum, the place of residence (whether in-state or out-of-state), and the student's own habits and needs. It is possible to live simply and to participate in the life of the student community on a modest budget. The best help the University can offer the student in budget planning is to provide available figures for expenses.
Health service and admission to athletic events are available to any currently enrolled student. The payment of the appropriate fees will permit any combination of graduate and undergraduate courses to be taken that may be required or approved. Charges for all coursework will be assessed by course level.
All fees are for the academic year 2004-2005 and are subject to change by action of the Tennessee Board of Regents. The new fee amounts will be published each year when approved by the Tennessee Board of Regents (usually around July 1). The updated rates will be available in July on the MTSU Web site at www.mtsu.edu/~bursarmt.

## Registration Fees

## Maintenance Fees

| In-State Students |  |
| :--- | ---: |
| Full-time (per semester) | $\$ 1,676.00$ |
| $\quad$ Undergraduate $(12$ hours and over) | $2,250.00$ |
| $\quad$ Graduate (10 hours or more) |  |
| Part-time (per credit hour) | 147.00 |
| $\quad$ Undergraduate | 238.00 |


| Out-of-State Students* |  |
| :--- | ---: |
| Full-time Students (per semester, 12 hours and over) |  |
| $\quad$ Undergraduate | $5,920.00$ |
| $\quad$ Graduate | $6,494.00$ |
| Part-time Students (per credit hour) |  |
| $\quad$ Undergraduate | 515.00 |
| $\quad$ Graduate | 606.00 |
| Debt Service Fee |  |
| Full-time (per semester) | 83.00 |
| Part-time (per credit hour) | 7.00 |

## General Access Fee

Required of all freshman and sophomore students
Full-time
23.00 plus 23.00 per hour

[^2]Required of all students except freshman and sophomore students Full-time $\quad \$ 251.00$ Part-time $\quad \$ 23.00$ plus 19.00 per hour

Recreation Activity Fee
(Required of all students) \$25.00
SGA Student Activity Fee (Required of all students registering for 7 hours or more)
\$20.00

## Postal Services Fee

(Required of all students registering for 12 or more hours) $\$ 10.00$
Late Registration (nonrefundable)
\$100.00
(Late registration fee of $\$ 100$ will be charged all students who register or reregister on or after the first day of class.)

NOTE: The rates quoted above are those in effect for the 2004-2005 academic year. A portion of the General Access Fee is allocated to the Parking and Transportation Services department; upon payment of all registration fees, students are eligible to receive a student parking permit.

## Materials Fees

Agribusiness and Agriscience
Applies to ABAS 2400, 3400, 4400, $4460 \quad \$ 150$ per course

## Biology

Applies to BIOL 1030, 1110, 1120, 2020,
2120, 2230, 3020, 3040, 3210, 4080,
4110, 4140, 4210, 4270, 4290,
4300, 4360, 4430, 4440, 4450,
4510, 4550, 5020, 5040, 5140,
5510, 5550, 6080, 6290, 6330, 6360, 6380, 6390, 6410, 6430, 6440, 6450
\$20 per course

## Chemistry

Applies to PSCI 1030; CHEM 1010, 1011, 1020, 1021, 1110, 1111, 1120, 1121, 2030, 2230, 3010, 3020, 3530, 4230, 4330, 4340, 4350, 4360, 4630, 4880 Applies to CHEM 2880, 3880
Applies to CHEM 4430, 4530
Applies to CHEM 4780
\$20 per course

## Special Course Fees

Jennings A. Jones College of Business
Applies to ACTG, B AD, BLAW, BMOM,
ECON, IN, INFS, MGMT, MKT, Q M
(excludes ECON 2410 and 2420 and
Q M 2610 )
$\begin{aligned} & \text { Private Instruction Music Fees }\end{aligned}$
$\begin{aligned} & \text { Charged to all music private instruction } \\
& \text { courses }\end{aligned}$

| $\$ 20$ per credit hour |
| :--- |
|  |

Concrete Management Certification Fees
Applies to CIM 3000, 3050
\$115 per course
Nursing Testing Fees
Applies to NURS 3110, 3130, 3150,
3170, 3230, 3250, 3270, 4130, 4150, 4210, 4230, 4250
\$25 per course

## Fall 2004-Summer 2005 Regents Online Degree Program Fees

Regents Online Degree Program (RODP) courses are charged per hour and viewed separately from MTSU courses so as not to mix with the full-time cap applicable to MTSU courses. RODP fees are computed in addition to any MTSU course fees and do not apply to the full-time maximum for MTSU registration fees.

| In-State Resident - Maintenance Fees |  |
| :--- | ---: |
| $\quad$ Undergraduate | $\$ 147.00$ per hour |
| $\quad$ Graduate | 238.00 per hour |
| Out-of-State Resident |  |
| $\quad$ Undergraduate | 515.00 per hour |
| $\quad$ Graduate | 606.00 per hour |
| Online Course Fee |  |
| $\quad$ Undergraduate | 59.00 per hour |
| $\quad$ Graduate | 59.00 per hour |

## Summer 2005 Registration Fees

NOTE: Fees are charged per hour for all classes. NO maximum applies for summer.
In-State Students
Undergraduate \$ 147.00 per hour
Graduate 238.00 per hour
Out-of-State Residents
Undergraduate 515.00 per hour
Graduate 606.00 per hour
Debt Services Fee
7.00 per hour

General Access Fee
Required of all freshman and sophomore students 23.00 per hour
Required of all students except freshman and sophomore students
Recreation Fee (Nonrefundable)
19.00 per hour

SGA Student Activity Fee (Required of all students registering for 7 hours or more)
25.00
20.00

Postal Services Fee
(Required of all students registering for 12 or more hours) 10.00
Late Registration (nonrefundable) 100.00

## Campus Housing Expenses

## Reservations

Fall and Spring Semesters, required prepayment \$200.00
Spring Semester only, required prepayment 100.00
Summer Session, required prepayment 125.00

## 2004-2005 Room/Apartment Rates

Single Students/Residence Halls (shared bedroom, quad bath;
shared bedroom, community bath)
Cost per semester
\$1,288.00
Summer Session I 277.00
Summer Session II
379.00

Summer Session III
758.00

Session IV
379.00

All Summer School
985.00
(private bedroom)
All residence halls, per semester 2,254.00
Summer I
399.00

Summer II
663.00

Summer III
1,326.00
Summer IV
663.00

All Summer School
1,725.00

| Single Students, Renovated Residence Halls |  |  |
| :--- | ---: | ---: |
|  | Double | Private |
| Cost per semester | $\$ 1,739.00$ | $\$ 3,043.00$ |
| Session I*** | 306.00 | 536.00 |
| Session II** | 512.00 | 896.00 |
| Session III** | $1,024.00$ | $1,792.00$ |
| Session II** | 512.00 | 896.00 |
| All Summer School* | $1,330.00$ | $2,328.00$ |

Womack Lane Apartments - one bedroom (shared apartment, shared bedroom)

| Cost per semester | $\$ 1,404.00$ |
| :--- | ---: |
| Summer Session I* | 24.00 |
| Summer II* | 414.00 |
| Summer III* | 828.00 |
| Summer IV* | 414.00 |
| All Summer School* | $1,077.00$ |

Womack Lane and Scarlett Commons
(shared apartment, private bedroom)

| Womack Lane Apartments - two bedrooms |  |
| :--- | ---: |
| Cost per semester | $\$ 1,568.00$ |
| Summer I** | 275.00 |
| Summer II* | 464.00 |
| Summer III* | 928.00 |
| Summer IV* | 464.00 |
| All Summer School* | $1,203.00$ |
| Scarlett Commons |  |
| Cost per semester | $\$ 2,405.00$ |
| Summer I* | 81.00 |
| Summer II* | 133.00 |
| Summer III* | 266.00 |
| Summer IV* | 133.00 |
| All Summer School* | 347.00 |

Womack Lane Apartments - Families
(one bedroom, unfurnished)

| Cost per semester | $\$ 2,432.00$ |
| :--- | ---: |
| Summer I* | 424.00 |
| Summer II* | 719.00 |


| Summer III* | $1,438.00$ |
| :--- | ---: |
| Summer IV* | 719.00 |


| All Summer School* | $1,862.00$ |
| :--- | :--- |


| (one bedroom, semi-furnished) |
| :--- | :--- |
| Cost per semester |$\$ 2,807.00$


| Summer I* | 494.00 |
| :--- | ---: |
| Summer II* | 831.00 |
| Summer III* | $1,662.00$ |
| Summer IV* | 83.00 |
| All Summer School* | $2,156.00$ |
| (two bedroom, unfurnished) |  |
| Cost per semester | $\$ 2,772.00$ |
| Summer I* | 492.00 |
| Summer II* | 815.00 |
| Summer III* | $1,630.00$ |
| Summer IV* | 815.00 |
| All Summer School* | $2,122.00$ |
| (two bedroom, semi-furnished) | $\$ 3,135.00$ |
| Cost per semester | 551.00 |
| Summer I** | 927.00 |
| Summer II* | $1,854.00$ |
| Summer III* | 927.00 |
| Summer IV* | $2,405.00$ |

NOTE: Room rents are subject to change by action of the Tennessee Board of Regents. Each student will pay the amount in effect at the time of registration. Apartment summer sessions noted with an asterisk are available only to those residents who have signed a license agreement and made prepayments for the subsequent academic year beginning in August.
*Residence hall summer sessions are restricted to specific locations.

## Other Applicable Charges

| Admission application fee |  |
| :---: | :---: |
| Undergraduate | \$25.00* |
| Graduate | 25.00 |
| International | 30.00 |
| Automobile registration-academic year: |  |
| Faculty/administration/staff | 85.00 |
| Employees with disabilities | 10.00 |
| Executive Parking Permits | 120.00 |
| Student permits** | n/c |
| Automobile registration-summer only: |  |
| Faculty/administration/staff | 33.00 |
| Student permits | 23.00 |
| Employees with disabilities | 5.00 |
| Diploma insert (after the first) | 10.00 |
| Dissertation binding (1 original and 4 copies) |  |
| Thesis binding (master's degree) (1 original and 3 copies) | 37.00 |
| Extra copy thesis (or dissertation binding) | 9.20 |
| Graduate entrance tests: |  |
| Miller Analogies | 45.00 |
| Graduate Record Exam-subject | 130.00 |
| ID card replacement | 10.00 |
| Music, individual instruction, 2 lessons each week | 300.00 |
| 1 lesson each week | 150.00 |
| Post Office box rent each semester (required of all students registering for 12 hours or more) | 10.00 |
| Nursery school, semester |  |
| Infants and toddlers, 2 days/week | 175.00 |
| Preschool (4 days per week ) | 300.00 |
| Day Care Fees (per week) |  |
| Full-time ( $M-F$ ) | 76.00 |
| Part-time (MWF) | 46.00 |
| Part-time (TTH) | 31.00 |

*Pending change July 1, 2004
**A portion of the general access fee is allocated to the Parking and Transportation and Services Department; upon payment of all registration fees, students are eligible to receive a student parking permit.
No student will be allowed to preregister, register, or receive a grade report or transcript of credits until all accounts are settled. A student will not be officially enrolled until all fees are cleared through the Business Office.

## Late Registration

Students who complete registration (including the payment of fees) during the late registration period will be charged a $\$ 100$ late fee.

## Matriculation Fee for Incompletes

If a student receives an " I " for a course, he or she need not reregister or pay fees for the course every semester until the course is completed. Such students should work only with the course instructor to complete grade requirements.

## Returned Checks

Acknowledged bank errors excepted, a $\$ 20.00$ service charge will be assessed for each bad check, whether given in payment of fees, for purchase of books, cashed by the University for the personal convenience of the student, or for any
other reason. The University will decline to accept checks from any student who has checks returned by the bank more than once. A $\$ 100.00$ late registration fee may be assessed for any bad check given in payment of registration fees.

## Automobiles

All privately owned or operated vehicles for use on the campus must be registered annually with Parking and Transportation Services and must display an official registration permit. (See above for charges.) For more information or clarification, please refer to Traffic and Parking Regulations, available in the Parking and Transportation Services Office.

## Auditing Charges

An auditor is one who enrolls and participates in a course without expectation of receiving academic credit. The same registration procedure is followed and the same fees charged as for courses taken for credit. An audited course is not applicable to any degree or certification program.
Regular class attendance is expected. Other course requirements, which may be obtained in writing from the instructor, will vary depending upon the nature of the course. Students interested in auditing a course should discuss course requirements prior to enrolling. Failure to meet course requirements may result in removal from the course at the request of the instructor. A successful audit will be recorded on the transcript with the designation NC.
A change from audit to credit or credit to audit must be processed by the last day to add a class.

Persons 60 years of age or older or disabled persons suffering from a permanent total disability which totally incapacitates such persons from working at an occupation which results in an income (T.C.A., Section 49-7-113) who are domiciled in Tennessee may audit courses at any state-supported college or university without paying tuition charges. Registration under this program is on a space-available basis; therefore, students cannot priority register. Class selection should be processed on the first day of classes for the term or session. Proof of age or disability must be provided.

## 65-Year-Old/Disabled Credit Student

Persons 65 years of age or older or disabled persons suffering from a permanent total disability which totally incapacitates such persons from working at an occupation which results in an income (T.C.A., Section 49-7-113) who are domiciled in Tennessee may register for classes for credit by paying a service fee not to exceed $\$ 75$ per semester. Registration under this program is on a space-available basis; therefore students cannot priority register. Class selection should be processed on the first day of classes for the term or session. No late fee is charged. An application fee is required. In addition, the applicant must be eligible for admission and submit proof of age or disability.

## Additional Charges

The University reserves the right to increase the charges listed herein or to add new ones whenever such increases or additions are found to be necessary.

## Board

All freshman men and women living in the residence halls during Fall and Spring Semesters will be required to participate in a freshman meal plan. All other students may secure meals in the University cafeterias or grill either through optional meal plans available from the food service or a meal-to-meal cash basis.

## Deferred Payment Plan

Although all charges are due and payable in full at the beginning of each term, students in good financial standing at MTSU may defer payment of up to 50 percent of their registration, housing, and freshmen meal plan fees for the Fall and Spring Semesters. To be eligible for the Deferred Payment Plan, each participant must make a minimum down payment of 50 percent of the registration fees, residence hall rent, and freshmen meal plan costs. The balance due must be $\$ 400$ or more after all discounts, waivers, financial aid, and other credits are applied.
A student who fails to make timely payments in a previous term may be denied the right to participate in the Deferred Payment Plan in future enrollment periods. Any student who makes payment with a check which is subsequently returned will be denied participation in the Deferred Payment Plan in all future terms.

The amount deferred will be payable in two monthly installments. For the Fall Term, installment payments are due by October 1 and November 1. Payments for the Spring term are due March 1 and April 1. The University is not obligated to send reminder notices before the payment is due. Participants in this plan must apply all discounts, waivers, credits, and financial aid, including student loans, toward payment of registration fees before a deferment will be considered. Financial aid and other credits received after the initial payment will be applied to the remaining balance, and future amounts due will be recomputed. No refunds can be made until all fees are paid in full.

Students must select either the Deferred Payment Plan or the Housing Deferment Plan.
Students will not be withdrawn for failure to pay the second or third payments. However, the balance must be paid in full before the student can preregister for future terms even if preregistration is prior to the due date.
Each participant will be charged a $\mathbf{\$ 5 0 . 0 0}$ service fee each term to defray administrative costs. This fee is payable along with the 50 percent down payment on or before the registration fee payment deadline. An additional late payment charge of $\$ 25$ will be assessed for each installment not paid
on or before the due date and each 30-day period past the second installment up to a maximum of $\$ 100$. Students who make payments with checks that are returned will be charged a $\$ 20$ return check service fee as well as any applicable late fees.

If a payment is not received in the Business Office by the scheduled payment due date, the University will withhold all services from the student, including grades, transcripts, and future registration until the fees have been paid in full including any assessed late fees.
All existing rules and policies pertaining to returned checks, refunds, withdrawals, dropped classes, and collection costs are applicable to the Deferred Payment Plan.

Payment of the minimum amount due on the Deferred Payment Plan finalizes registration. The class schedule will not be dropped. It is not necessary to also confirm on WebMT. The Deferred Payment Plan service fee, late fee, and minimum amount are effective for 2004-2005 and are subject to change in future terms.
Additional fees for classes added after fee payment are due before the late registration fee payment deadline. Any unpaid fees after this date will be processed as a deferred payment. The $\$ 50$ Deferred Payment Plan service fee and any applicable $\$ 25$ late payment fees will be charged.
Questions regarding the Deferred Payment Plan should be directed to the Bursar's Office at (615) 898-2761.

## Deferred Payment for Recipients of Veterans Affairs or Other Governmentally Funded Educational Assistance Benefits

Service members, veterans, and dependents of veterans who are eligible beneficiaries of U.S. Department of Veterans Affairs educational benefits or other governmentally funded educational assistance, subject to the conditions and guidelines set forth in Tennessee Code Annotated 49-7-104 as amended, may elect, upon formal application, to defer payment of required tuition and fees until the final day of the term for which the deferment must be made no later than 14 days after the beginning of the term, and the amount of the deferment shall not exceed the total monetary benefits to be received for the term. Students who have been granted deferments are expected to make timely payments on their outstanding tuition and fees balance once educational benefits are being delivered, and eligibility for such deferment shall terminate if the student fails to abide by any applicable rule or regulation or to act in good faith in making timely payments. This notice is published pursuant to Public Chapter 279, Acts of 2003, effective July 1, 2003.

## Refund of Fees

NOTE: No refund of housing fees, registration, or other fees will be made to students who are dismissed or suspended.

## Fall and Spring Semesters*

Those students who withdraw from the University within 14 calendar days after the beginning of classes for the Fall and Spring terms will be refunded 75 percent of their maintenance fees, debt service fee, general access fee, materials fees, course fees, or music fees (if any). Those withdrawing after the 14th day but before 25 percent of the time period covered by the term has passed will be refunded 25 percent of their fees. No refunds will be made beyond the 25 percent period. Specific dates for each term are given in the class schedule book for that term. The same refund schedule applies to students who drop to an hourly load below fulltime. The percentage then applies to the difference between the new fees calculated on an hourly basis and actual fees paid. All other fees are nonrefundable.
Drop dates for courses which meet for a shorter time period than normal will be prorated based upon the course drop dates for the full term.

## Summer*

For Summer sessions and other short terms, the 75 percent refund period and the 25 percent refund period will extend a length of time which is the same proportion of the term as the 75 percent and 25 percent refund periods are in the regular terms.
Students who preregister for a Summer session course and find it necessary to drop or withdraw before the first day of class for that session will be refunded 100 percent for that course. Otherwise the regular refund schedule will apply.
Specific dates applying to each session are listed in the current summer schedule book.
*Students who register after the official registration period and withdraw from the University will have their refunds calculated as if registration had taken place on the official day of registration.

## Refunds of Housing Expenses

## Residence Halls

Applications for residence halls and on-campus apartments must be accompanied by the required prepayment as outlined in the license agreement. Prepayment is a security of good faith that denotes the applicant's serious intent to reside in on-campus housing. Prepayment fees for 2004-2005 are $\$ 200.00$, $\$ 100.00$ of which is applied toward Fall semester charges, and $\$ 100.00$ of which is applied toward Spring semester charges. This prepayment is refundable prior to check-in according to the following schedule. All cancellations must be submitted in writing to the Housing and Residential Life Office. Prepayment amounts represent approxi-
mately 25 percent of the total semester fee and may vary from year to year. Students should contact Housing and Residential Life to verify specific changes.

## Academic Year (Fall and Spring) Applications

| Date of Cancellation | Refund Amount |
| :--- | :---: |
| By May 1 | $\$ 150.00$ |
| By June 1 | $\$ 100.00$ |
| By July 1 | $\$ 50.00$ |
| After July 1, but prior to the first check-in day |  |
| in August | $\$ 00.00$ |

## Spring Semester Only Applications

## Date of Cancellation

Refund Amount
By October 15
\$ 50.00
After October 15, but prior to the first check-in day in January
\$ 00.00

## Summer Housing

Details regarding application, fees, and refunds for summer assignment to residence halls and on-campus apartments may be obtained by contacting the Housing and Residential Life Office at (615) 898-2971.

## Housing Fees

The refunds of residence hall fees after registration will be prorated on a weekly calendar basis when the student is forced to withdraw from the residence hall because of approved medical reasons confirmed in writing by a licensed physician.
Full refund will be made in the case of death. No refund will be made other than under the above conditions, except as specified in the Student Housing Agreement.

## Direct Deposit of Financial Aid Credit Balance Refunds

Students who have a credit balance due to financial aid should have the excess aid balance direct deposited into their checking or savings accounts. If financial aid has been credited to the student's account, the refund will be deposited into the student's bank account and available for use on the first day of refund disbursement if the student has met all financial aid eligibility requirements and/or completed all required paperwork.
Students must complete an authorization form at least 14 days prior to the first day of classes. Financial aid proceeds will not be transferred to the student's banking account without authorization. An authorization form can be obtained from the Business Office, Cope Administration Building, Cashier Window 9, or Room 103 or by calling (615) 898-5716. Direct Deposit Authorization Forms are available also via the Web at www.mtsu.edu/~bursarmt/direct.html.

This authorization will remain in effect until terminated by the student.

## Financial Aid

The Office of Student Financial Aid, located in Cope Administration Building 218, provides assistance for qualified students. Office personnel will provide forms and help to seek available aid for graduate students.
Following is a summary of financial aid administered through MTSU. Unless otherwise indicated, application is made to the Office of Student Financial Aid. Results from the Free Application for Federal Student Aid (FAFSA) are required before eligibility can be determined for federal financial aid programs.

## Sources of Aid and Eligibility

## Federal Programs

## Subsidized Federal Stafford Loan Program

Graduate students enrolled at least half-time (five graduate hours) and in good standing or accepted for enrollment at MTSU; based on need which is determined from the results received from the FAFSA and cost of attendance; maximum loan limit for two (2) semesters is $\$ 8,500$ not to exceed a lifetime limit of $\$ 65,500$ (including the undergraduate loans); must be making Satisfactory Academic Progress (see Satisfactory Academic Progress Policy on page 36). Applications are available in the Financial Aid Office or on MTSU's Web site at www.mtsu.edu/ financialaid/forms.htm.

## Unsubsidized Federal Stafford Loan Program

Graduate students enrolled at least half-time (five graduate hours) and in good standing or accepted for enrollment at MTSU; based on eligibility and cost of attendance; maximum loan limit for two (2) semesters is \$10,000 not to exceed a lifetime limit of \$73,000 (including the undergraduate loans); must be making Satisfactory Academic Progress (see Satisfactory Academic Progress Policy on page 36). Applications are available in the Financial Aid Office or on MTSU's Web site at www.mtsu.edu/financialaid/forms.htm.

## Federal Perkins Loan

Graduate students enrolled for at least half-time (five graduate hours) and in good standing or accepted for enrollment at MTSU; based on need which is determined from the results received from the FAFSA and cost of attendance; lifetime maximum of $\$ 40,000$; must be making Satisfactory Academic Progress (see Satisfactory Academic Progress Policy on page 36). Applications are available in the Financial Aid Office.

## Federal Work-Study Program

Graduate students enrolled at least half-time (five graduate hours) and in good standing or accepted for enrollment at MTSU; based on eligibility and cost of attendance; maximum of 20 hours per week; must be making Satisfactory Academic Progress (see Satisfactory Academic Progress Policy on page 36).

## Assistantships and Fellowships

A limited number of graduate teaching assistantships, graduate research assistantships, minority scholarships, and doctoral fellowships are available. Applications may be obtained from the College of Graduate Studies or from the appropriate academic department. Information on stipends is also available from these sources. An individual is expected to be in good standing, i.e., having met the requirements for admission to graduate school (including satisfactory test scores) and having a cumulative GPA of 3.00 or more.

## How to Apply

Step 1. Prospective students should very carefully complete the Free Application for Federal Student Aid (FAFSA). Forms are available beginning in January for the next Fall, Spring, and Summer terms. Forms are available from the MTSU Financial Aid Office.

Step 2. The completed FAFSA can be mailed to the processing center using the envelope provided with the application or by completing the FAFSA online on the Internet at www.fafsa.ed.gov. The instructions must be followed very carefully. The federal processor will not process the application until the "signature page" is received. It generally takes four to six weeks for the federal processor to manually process the application. It takes about two to four weeks for the application process via the Internet. The Federal Processing Center will send a Student Aid Report (SAR) to the student and MTSU (if the student enters the MTSU School Code of 003510 in the school section of the FAFSA).

Step 3. When the MTSU Financial Aid Office receives a complete and valid SAR, students will receive a Fall/Spring award letter stating the estimated financial aid they will be awarded. The award letter is based on full-time attendance and will indicate loans for which the student is eligible. After the award letter is printed, the estimated aid amounts may change due to changes in enrollment, EFC amounts, and other aid. Please remember to write accept or reject beside each award, sign the form, and return it to the Financial Aid Office, Cope Administration Building, Room 218.
Step 4. Students applying for one of the Federal Stafford Loan Programs must complete and submit a Loan Request Sheet (LRS) to the Financial Aid Office. Copies of the LRS are included with the award letter, available in the MTSU Financial Aid Office, or available on the Web at www.mtsu.edu/ ~financialaid/. To request a loan, a valid SAR must be on file. To ensure the funds will be ready, the request should be submitted a few months before the loan is needed.

## General Financial Aid Information

1. Graduate students who are required to enroll in undergraduate courses to be accepted into a graduate program may qualify for Stafford loans at the undergraduate level provided they have not reached their aggregate loan limits. Students may receive Stafford loans for 12 consecutive months. Students should obtain a letter from the department or graduate analyst indicating which courses are required as prerequisites. This form must be submitted to the Financial Aid Office before a loan can be processed.
2. For the Fall and Spring semesters, students who withdraw within the first four (4) days of classes may have all of their financial aid canceled. Students who drop course(s) within the snapshot date (generally the first fourteen (14) days of classes) may have their aid adjusted according to the number of hours enrolled as of that date (see the current semester's schedule book for exact dates). Also, see the Financial Aid Return Policy in the
current schedule book which details information regarding withdrawing before 60 percent of the semester.
3. For each session of the Summer term, students who withdraw before the last day to drop without receiving a grade may have all of their aid canceled. Students who drop course(s) before the last day to drop without a grade may have their financial aid adjusted (see the Summer semester's schedule book for exact dates). Also, see the Financial Aid Return Policy of the current Summer schedule book about information regarding withdrawing before 60 percent of the term.
4. For Stafford and Perkins loans, class attendance will be verified for disbursements that occur during the semester on at least a half-time ( 5 graduate hours) basis; funds may not be disbursed or awarded aid may be adjusted.
5. Attendance must be verified for students who are enrolled in correspondence courses, online courses, telecourses, the Regents degree program, or courses via the Internet. Because attendance is not required for these courses, instructors document attendance according to completed homework assignments. In order that their attendance can be documented, students should complete their homework assignments in a timely manner. If students wish to withdraw or drop from these courses, it is recommended they contact their instructor(s). Students' financial aid may be adjusted or canceled if instructors are unable to verify attendance.
6. Any scholarships received in excess of tuition, fees, and books are considered taxable income. See your tax preparer for tax filing information.
7. Graduate students who have borrowed more than \$70,000 in Stafford loans may have their loan amounts limited to the anticipated amount of tuition, travel, and books. Exceptions must be approved by the director or his/her designee.

## Satisfactory Academic Progress Policy

Federal regulations require that all federal financial aid recipients be enrolled in a degree-seeking program and maintain satisfactory academic progress toward a degree to maintain eligibility. MTSU complies with this requirement by monitoring each aid recipient's cumulative grade point average (GPA), completion rate, and maximum timeframe for completion of a degree. The following describes MTSU's method for monitoring each of these measures.

## Cumulative Grade Point Average

Graduate students. To be eligible for financial aid, a student's GPA must meet at least the minimum requirements found in the graduate catalog or be approved by the College of Graduate Studies for enrollment.

## Completion Rate

Students must earn 66 percent of their cumulative credits attempted to remain eligible for financial aid. Grades of A, $B, C, D, P$, or S, including any " + " or "-" options, count as credits earned. All courses for credit will be counted as hours attempted including withdrawals, incompletes, courses re-
peated, and courses resulting in grades of $\mathrm{N}, \mathrm{U}, \mathrm{WF}, \mathrm{WP}$, and F.

1. Probation. Students whose completion rate is greater than 50 percent but less than the required 66 percent will be placed on probation.
2. Suspension. Students whose completion rate is less than 50 percent of the credit hours attempted or those previously placed on probation who did not pass 75 percent of attempted credit hours will be suspended from eligibility for federal grants, loans, and federal work-study employment. Students may still be eligible for emergency short-term loans and other University funds.

## Time Limitations

Graduates. The maximum time limitation for graduate students will be 150 percent of the standards established by the College of Graduate Studies and published in the graduate catalog.

## Review of Progress Standards

1. GPA. The Records Office reviews the GPA at the end of each semester. Students may appeal academic suspension to the undergraduate or graduate academic appeals committee. The decision of the committee is final.
2. Completion rate. The completion rate is reviewed annually at the end of the Spring semester by the Financial Aid Office.
3. Time limitation. The maximum time limit is reviewed at the end of each semester by the Financial Aid Office.

## Notification/Appeals

1. Probation. The Financial Aid Office will send a letter to students placed on financial aid probation notifying them of their financial aid status and the expected requirements. Each student will be allowed at least one probationary period during the course of enrollment.
2. Suspension. Students suspended from financial aid will receive a letter from the Financial Aid Office along with a Satisfactory Progress Appeal form. Students are allowed to appeal their suspension if they can document extenuating circumstances beyond their control which have since been resolved. Examples include death of immediate family member and extended medical illness and/or disability. Provisions also may be made for students who have been approved to participate in the Academic Fresh Start program or have military credits that cannot be counted toward a degree. Any other circumstances not listed above must be well documented and have the approval of a financial aid administrator and the director of Financial Aid.
a. Financial Aid Suspension Appeals. Student appeals are reviewed by an internal committee composed of financial aid staff. Each student will be notified of the appeal decision and if denied what action must be taken to regain financial aid eligibility.
b. Loan and Scholarship Committee. Students who are suspended a second time or who have been denied by the internal financial aid committee may appeal to the Loan and Scholarship Committee or its designee. The Loan and Scholarship Committee comprises faculty members, students, and administrators. Since faculty and students do not report until the start of school, students appealing to this committee may be personally responsible for paying registration expenses or signing a deferment to confirm they will attend and hold their selected classes.

## Reinstatement of Financial Aid if Appeal Denied

Students can attend MTSU and make up deficiencies in credit hours at their personal expense. If a student chooses to do this, a written appeal to the Financial Aid Office must be made when the deficiencies have been completed. This option is not available to students who have reached the maximum time limitation.

## No Credit Hours Earned

A student who earns no credit hours for one semester will be placed on probation. A student who earns no credit hours for the last two consecutive semesters enrolled will be suspended from federal financial aid. However, the student may appeal the suspension. Please see the suspension guidelines in Notification/Appeals above.

## Teacher Licensure

Students who have completed an undergraduate degree and are enrolled for the sole purpose of attaining teacher licensure are eligible for loans at the undergraduate level. To receive aid, students must be accepted into the teacher education program. Students may be eligible for aid one semester prior to being accepted provided they have taken or will be taking FOED 1110 and FOED 2110, have a minimum GPA of 2.5, and provide the Financial Aid Office with a copy of their program of study. Exceptions may be made by the director or his/her designee.

## Federal Financial Aid Return Policy

For the Fall and Spring semesters, a federal financial aid return will be calculated on all students who withdraw after the fourth day of class but prior to completing 60 percent of the term. For the Summer term, a federal financial aid return will be calculated for all students who withdraw after the last day to drop without receiving a grade, but prior to completing 60 percent of the session. The amount of the return will be prorated based on federal guidelines. Students may owe a refund to the U.S. Department of Education and/or MTSU. Consult the current semester's schedule book for important dates with regard to withdrawing. Please review the General Financial Aid Information section or contact the Financial Aid Office with questions regarding this policy.


# Academic Regulations 

## Academic StandardsRetention, Probation, and Suspension

A master's or specialist in education student must maintain a cumulative GPA of at least $\mathbf{3 . 0 0}$ for all graduate work completed at MTSU as well as in the major, and a doctoral student must maintain a minimum GPA of 3.25. Six semester hours of C grade (C+, C, or C-) coursework may be applied toward a master's or specialist's degree; seven hours of C grade may count toward a Ph.D.; no courses with a C grade are acceptable toward the D.A. degree requirements. Courses with a grade lower than C- may not be applied toward any graduate degree requirements. A graduate student failing to meet the applicable minimum cumulative graduate GPA retention standard listed below or whose cumulative graduate GPA is less than 3.00 for three consecutive semesters will be placed on academic probation for the subsequent term. Probation in itself has no serious consequences other than to alert the student of potential academic problems and the requirement to (re)establish satisfactory academic status. Conversely, however, suspension is quite serious. Should a suspended student not be readmitted, termination of graduate status would result.

In addition to minimum GPA standards, degree-seeking students are expected to take appropriate graduate courses towards their degree objective, as determined by the graduate program. Non-degree-seeking graduate students are expected to take graduate courses. The number of "credit hours" listed below in bold applies only to those courses graded A through $F$, and not to $S / \cup$ graded courses.
NOTE: In addition to the guidelines below, the two-course repeat policy may result in a dramatically increased GPA.
The guidelines below represent the absolute minimum GPA to avert graduate academic probation status. However, a cumulative GPA greater than or equal to 3.00 is required for satisfactory academic progress at the graduate level.

[^3]Greater than 15-18 credit (quality) hours completed ...... 2.83 GPA (If 18 graduate hours have been completed, a GPA of 2.83 reflects a grade point deficit of 3 . Next term, unless a course is repeated, 3 or more hours of B grade with no B- or lower grades will generate a GPA greater than or equal to 2.85.)
Greater than 18-21 credits (quality) hours completed .... 2.85 GPA (If 21 graduate hours have been completed, a GPA of 2.85 still reflects a grade point deficit of 3 . Next term, unless a course is repeated, 3 or more hours of $A$ grade (or 3 hours of $A$ - and 3 hours of $B+$ grades) with no $B$ - or lower grades will generate a GPA greater than or equal to 3.00 and the grade point deficit will disappear.)
Greater than 21 credits (quality) hours completed $\qquad$ 3.00 GPA
(Master's and educational specialist students must maintain a cumulative GPA greater than or equal to 3.00 and doctoral students must maintain a cumulative GPA greater than or equal to 3.25 in all remaining terms.)

A student on academic probation who fails to meet the above applicable standard during the next term in which enrolled will be suspended.
NOTE: Individual graduate programs may propose higher minimum grade standards than the above.

## Access to Records

The MTSU policy concerning student access to educational records is printed on page 43.

## Advancement to Candidacy-Filing a Form

In consultation with the graduate advisor, each degree seeking student must file a formal outline of the degree program on a Candidacy Form available at the Graduate Office or on our Web site (www.mtsu.edu/~graduate). The Candidacy Form requires the approval of the major professor, the reader(s), and the graduate analyst. A master's or specialist's student may not register for more than 24 semester hours unless an approved Candidacy Form is on file. In general, a doctoral student will not be permitted to register for more than 36 semester hours unless an approved Candidacy Form is on file.
NOTE: Some departments require advancement to candidacy prior to the completion of 24 semester hours (Criminal Justice, 16 hours; Elementary and Special Education, 21 hours).

## Appeal of Academic Suspension

A student may seek reversal of academic suspension, for cause, by petitioning the Graduate Council Appeals Committee. Appeal forms are available in the College of Graduate Studies, Cope Administration Building, Room 114, or our Web site (www.mtsu.edu/~graduate). Appellants should contact the Graduate Office for the applicable deadline dates.

## Appeals, Other

Graduate students have the right to appeal for cause any decision affecting their academic standing as a graduate student. Cause excludes grade appeals, which are under the purview of the MTSU Grade Appeal Committee. The Appeal Advisory Committee of the Graduate Council is an ad hoc committee reporting to the dean of the College of Graduate Studies. The committee is convened at the discretion of the dean of the College of Graduate Studies.

The Graduate Council and the College of Graduate Studies have approved in principle the document Appeal Advisory Committee of the Graduate Council. Copies of this document are made available to all graduate students at the Graduate Student Orientation and are also available in the College of Graduate Studies, Cope Administration Building, Room 114.

## Candidacy-Changing a Form

Changes in degree programs are permitted upon proper filing and approval of a Change in Candidacy Form, which is available at the Graduate Office.

## Classes-Adding, Dropping, or Changing Sections

The procedures and deadlines to drop, add, or change a class are listed in the appropriate class schedule book.

## Classes-Cancellation of Scheduled Classes

The minimum enrollment requirement is ten students for upper-division and 5000-level graduate classes; eight students for 6000-level classes; and four enrollees for 7000level classes (excluding graduate research courses). Any class may be canceled if the number of enrollees is deemed insufficient; however, no scheduled class may be discontinued without the approval of the dean of the undergraduate college in which the course is offered.

## Examinations-Comprehensive (for Specialist's and Master's students; also see Glossary)

This examination is scheduled by each department during the time period designated by the Graduate Office. Normally, the comprehensive examination may be taken no more than twice, and failure to pass the comprehensive on the second attempt terminates one's degree program. Any exception to this "twice-only" rule must be recommended by the graduate program and approved by the dean of the College of Graduate Studies.

## Examinations—Qualifying

Please see the section under Doctor of Arts Degree, Doctor of Philosophy Degree, and/or the Glossary.

## Examinations-Other

Any graduate student may be required to take one or more additional tests designed to measure general educational achievement and/or achievement in selected major areas.
Graduate credit may not be earned by CLEP or Special Examination.

## Grades—Grading System

The following notations are used by faculty of the University to indicate the quality of the work performed by students taking graduate courses:

$$
\begin{aligned}
& \text { A, A- } \\
& \text { B+, B, B- } \\
& \text { C+, C, C- } \\
& \text { D+, D, D- } \\
& \text { F }
\end{aligned}
$$

## Grades That Do Not Influence Grade Point Average

W - Withdrawal
NC - No credit (audit)
I - Incomplete
S - Satisfactory
U - Unsatisfactory
P-Pass
The $\mathrm{P} / \mathrm{F}$ grade is given only in those courses with prior approval to use pass/fail grading. Courses may be taught on a pass/fail basis only after approval of the Graduate Council. Course descriptions state if pass/fail grading applies.
Pass or Satisfactory/Unsatisfactory grades are not used in determining the grade point average. However, they do count toward graduation credit requirements and are treated in every other respect as being equivalent to traditionally graded courses.
The grade I indicates that the student has not completed all course requirements due to illness or other uncontrollable circumstances, especially those which may occur toward the close of the term. Mere failure to make up work or turn in required work on time does not provide a basis for the grade of I unless the extenuating circumstances noted above are acceptable to the instructor. When a student fails to appear for a final examination without known cause, the grade to be reported should be determined as follows: If the student has done satisfactory work to that point, the grade I may be reported on the assumption that the student was ill or will otherwise present sufficient reason for official excuse; if the student has attended irregularly and has not done satisfactory work to that point, the grade F should be reported.
The "incomplete" must be removed during the succeeding semester, excluding summer. Otherwise, it converts to a grade of F . A student should not make up the "incomplete" by registering and paying again for the same course. The I grade carries no value until converted to a final grade.

## Grades—Appeal of Course Grades

## Level One

1. Student appeals concerning a course grade should be resolved by conference between the student and the faculty member who assigned the grade. The appeal must occur within forty (40) days of the graduation date for each term.
2. In the event of an impasse between the student and the faculty member, a student with an appeal of a grade shall discuss it with the department chair within ten (10) days of the conference with the involved faculty member. The department chair shall investigate the circumstances, record his/her findings, and send a copy to the student and the faculty member within ten (10) days of the notification of impasse. Although the department chair does not have the power to change the grade, he/she will make a recommendation concerning the appeal. These findings will become a part of the appeals record.

## Level Two

1. If the student is not satisfied, he/she may, within fifteen (15) days following receipt of the department chair's recommendation, refer the appeal plus all relevant data including stated reasons why he/she believes the appeal has thus far not been satisfied. The associate provost shall select a college committee to hear the appeal and transmit the appeal documents to the committee chair or to the office of the dean of the college which houses the selected appeals committee.
2. The committee hearing the appeal will receive documents and testimony regarding the circumstances, will record its findings, and shall render a decision. Notification of the committee's decision will be made to the student, faculty member, department chair, college dean, associate provost for Academic Affairs, and the director of Records.
3. The decision of the committee hearing the appeal will be final concerning the grade in question.
NOTE: In cases where the department chair is the person against whom the complaint is lodged, then the dean in whose college the department is located shall assume the duties of the chair in the investigation and decision making.

## Miscellaneous

1. The number of days indicated at each level above shall be considered the maximum, but every effort should be made to expedite the process.
2. The failure of the student to proceed from one level of the appeal procedure to the next level within the prescribed time limits shall be deemed to be an acceptance of the recommendations and/or decision previously rendered. All further considerations and proceedings regarding that particular appeal shall cease at that point.
3. A grade appeal may be withdrawn at any level without prejudice.
4. All appeal proceedings shall be kept as confidential as may be appropriate at each level.
5. A grade appeals committee shall have reasonable access to all official records for information necessary to the determination of a recommendation.

## Grades-Grade Point Average (Quality Credits)

Grade points are numerical values assigned to letter grades in order to provide a basis for quantitative determination of grade (quality) point averages. The four-point system with pluses and minuses is used.

The following system is used in determining grade point average:

| Grade |  | Grade Points |
| :---: | :--- | :---: |
| A | $=$ | 4.00 |
| A- | $=$ | 3.67 |
| B+ | $=$ | 3.33 |
| B | $=$ | 3.00 |
| B- | $=$ | 2.67 |
| C+ | $=$ | 2.33 |
| C | $=$ | 2.00 |
| C- | $=$ | 1.67 |
| D+ | $=$ | 1.33 |
| D | $=$ | 1.00 |
| D- | $=$ | 0.67 |
| F | $=$ | 0.00 |

The scholastic standing of a student is expressed in terms of grade point average (GPA). A GPA is the total number of grade points divided by the total number of credit hours (exclusive of P, S, and U credit hours) at Middle Tennessee State University, plus any transferred course work. For a grade of F, the credit hours count, but zero grade points are earned.

## Grades by WebMT

To access your grades online go to PipelineMT at www.mtsu.edu. Once logged in PipelineMT select WebMT, then Student and Financial Aid and then select the Grades link.

If you owe a student account balance which prevents release of your grades, WebMT will provide an option to allow you to pay your current term balance by credit card or check card (VISA or MasterCard) so that you can view your grades.

Grade reports are mailed only upon request. A printed copy of the current term grade report may be requested by selecting the appropriate option on WebMT. This option is available for approximately ten days after final exams each term. Once the option to request a grade report is no longer available, instructions will be given for requesting a complete transcript. If a printed grade report is requested, it will be mailed to the permanent address unless a different address has been designated for mailing grade reports. Instructions for requesting a transcript are available on WebMT.

## Intent to Graduate

An Intent to Graduate Form, available at the Graduate Office, must be filed by the student by the second week of the semester in which the student plans to graduate or no later than the end of the first week of Summer Session II (for August graduation).

## Prerequisites

The prerequisite for the graduate major is an undergraduate minor or its equivalent and/or the recommendation of the department chair. The prerequisite for the graduate minor is 12 semester hours of undergraduate coursework in that area or its equivalent and/or the recommendation of the department chair or delegate. If prerequisite coursework is marginally deficient, the student may be admitted to the College of Graduate Studies to make up the deficiencies concomitantly while taking graduate courses. Prerequisite courses do not apply toward meeting graduate program requirements.

## Repeated Courses

A graduate student may repeat graduate courses in which a grade lower than B-was earned. However, there are certain restrictions and limitations. A maximum of two courses, not to exceed eight credits combined, may be repeated for a grade change, i.e., the grade in the second attempt replaces the grade in the first attempt. If a third or subsequent course is repeated by the student, there will be no grade replacement; i.e., all attempts will be used in the grade point average calculation. All attempts are recorded on the transcript.
Graduate students may not repeat a course in which they have previously earned the grade of A or B without written approval from the graduate advisor and dean of the College of Graduate Studies. If granted, both the original and repeated grades will count in the GPA calculation.

## Student Load

A student's enrollment status is determined by the number of credit hours taken per term according to the following:

Full-time - 9 graduate hours
Three-quarter time - 7 graduate hours
One-half time - 5 graduate hours
Graduate students are limited to a maximum of 12 graduate hours per semester. If an exception is requested, overload forms must be signed by the graduate advisor and the dean of the College of Graduate Studies. Full-time status for students holding graduate assistantships is six (6) graduate semester hours. (This is not applicable to students receiving veterans benefits.)

## Teacher Licensure

All applications for professional teaching licenses in Tennessee must be filed with the dean of the College of Education and Behavioral Science who is responsible for recommending each applicant from this University. All applicants for teacher licensing should furnish the Tennessee State Department of Education a report of scores attained on the Core Battery Tests of the National Teacher Examinations. A copy of the scores should be sent to the Office of the Dean, College of Education and Behavioral Science. MTSU verification of the scores will be forwarded with the Application for Licensure.

## Post-Baccalaureate Teacher Education Program

The post-baccalaureate teacher education program is designed for individuals who have completed baccalaureate degrees but who did not complete teacher preparation. The College of Education and Behavioral Science requires candidates to address any course and program deficiencies in their undergraduate education to ensure the attainment of the knowledge and skills required in general education, professional education, and the major for the teaching field. Additional coursework and program requirements will be determined by the teacher licensure analyst. Transcript analysis forms for the post-baccalaureate program are available in the McWherter Learning Resources Center 173.
Post-baccalaureate students must also make formal application for admission to the teacher education program. Admission to teacher education is a prerequisite to enrollment in upper-division courses in Elementary Education (ELED), Reading (READ), Special Education (SPED) (except SPED 3010), Foundations of Education (FOED), or Youth Education (YOED).

## Time Limits

Students have six years after the date they matriculate to complete the requirements for a master's or specialist's degree. There is a ten-year time limit, after matriculation, to complete all requirements for the doctoral degree. Exceptions to these time limitations, for good cause, will be considered by the dean of the College of Graduate Studies when recommended by the graduate advisor and department chair.

## Transcripts

Student and official copies of a student's record are furnished free of charge upon written request by the student. No transcript will be provided for a student who has any financial indebtedness to the University or who has not completed admission procedures. Official transcripts from other institutions must be obtained directly from those institutions.

## Transfer Credit

In general, only coursework taken while in graduate status, prior to attending MTSU, will be transferred and only if those courses were not used in partial satisfaction of degree requirements at the previous university. Coursework transferred or accepted for credit toward a graduate degree must represent graduate coursework relevant to the degree, with course content and level of instruction resulting in student competencies at least equivalent to those of students enrolled in the institution's own graduate degree programs. Transfer credit requires the recommendation of the graduate advisor and approval of the dean of the College of Graduate Studies. Transfer courses with grades below B- will not be accepted for credit in the M.B.A. and M.S. in Accounting and Information Systems degree programs.

No graduate credit may be obtained by correspondence or work experience. A maximum of 12 semester hours of residence credit ( 6 in the major area) may be transferred and applied on a master's or specialist's degree.
In the D.A. program, no more than 12 semester hours (only 6 semester hours in the major) beyond the master's degree may be transferred from other doctoral institutions.

## Withdrawing from the University

Students finding it necessary to withdraw (completely separate) from the University after having selected classes for a future term should access WebMT (www.mtsu.edu) to drop all classes. A student may also initiate the official withdrawal process in Keathley University Center 130. Consult the class schedule book for each term to determine whether withdrawal should be accomplished by WebMT or through the Withdrawal Office in Guidance Services. Once classes have begun for the Summer term, withdrawal for that Summer term cannot be accomplished via WebMT.
The Records Office will be notified of the withdrawal and will notify each of the student's professors regarding the withdrawal and its effective date as determined by the Withdrawal Office in Guidance Services.

The grade for a student who officially withdraws from the University will be determined by the student's academic per-
formance prior to withdrawal. Withdrawal early in a term may result in no grades being assigned to the student. (The current schedule of classes carries dates governing withdrawal and appropriate grades.)
A student may not officially withdraw from the University after a date in the semester or term which is one week or less prior to the beginning of final examinations, except for reasons of mitigation or extenuation as shall be determined by the associate dean of students.

Any student who leaves the University without officially withdrawing will receive a grade of F for all work attempted.
A student under certain conditions may receive an administrative withdrawal from a single course or courses. Similar procedures are provided for a total severance from the University if conditions warrant. The following policy will determine the eligibility for an administrative withdrawal: The entry of W indicates that the student has been withdrawn from a course without reflection of grades. The entry of W results from a situation involving extreme extenuating circumstances as identified and originated with the University physician or counselors at Guidance Services and/or the associate dean of Student Life. The entry of W will be accomplished only with the full knowledge and written concurrence of the faculty member concerned.


## Student Access to Educational Records

## Definitions

Educational Records are those records, files, documents, and other materials which (1) contain information directly related to a student, and (2) are maintained by Middle Tennessee State University or by a person acting for the University. "Records" means information recorded in any medium, including, but not limited to, the following: handwriting, print, tapes, film, microfilm, and microfiche. Educational records do not include (1) personal notes, (2) records available only to law enforcement personnel, (3) employment records, (4) medical and psychiatric records (these are accessible by the student's physician).

For all nondisciplinary purposes, a student is any person who is or has been enrolled (registered for at least one class) at Middle Tennessee State University. An applicant who does not enroll or who is declared ineligible has no inherent right to inspect his or her file. Wherever "student" is used in reference to personal rights, an eligible parent of a dependent student has similar rights. This "eligible" parent is one who has satisfied Section 152 of the Internal Revenue Code of 1954 and who presents such proof to the custodian of the educational records. Normally this proof will be a certified copy of the parent's most recent federal income tax form.
Directory information includes the student's name, address (including e-mail), telephone listing, year and place of birth, major field of study, enrolled hours, student level (freshman, sophomore, etc.) participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. A student may request that such directory information not be released to anyone other than those persons defined as school officials. To do so, a Request for Nonrelease of Directory Information must be filed in the Records Office, Cope Administration 106.
The request is valid until the student completes a Cancellation of Request for Nonrelease of Directory Information form at the Records Office.

A school official is a person employed by the University as an administrator, instructor, supervisor, or support staff member.

A legitimate educational interest exists if the official needs to review an educational record to fulfill his or her professional responsibility.
Having access to an educational record means being allowed to see the original record.

## Release of Personally Identifiable Student Educational Records

Middle Tennessee State University shall not permit access to or the release of any information in the educational records of any student that is personally identifiable (other than di-
rectory information) without the written consent of the student to any party other than the following:

1. MTSU officials and staff who have legitimate educational interests;
2. officials of other schools in which the student seeks admission;
3. appropriate persons in connection with a student's application for, or receipt of, financial aid;
4. federal or state officials as defined in paragraph 99.37 of the Family Educational Rights and Privacy Act of 1974;
5. state and local officials authorized by state statute;
6. organizations conducting studies for or on the behalf of MTSU for the purpose of assisting in accomplishing the University's stated goals, when such information will be used only by such organizations and subsequently destroyed when no longer needed for the intended purpose;
7. accrediting organizations, to carry out their functions;
8. parents of a dependent student as defined in section 152 of the Internal Revenue Code of 1954 (Written consent may be allowed from either of these separated or divorced parents subject to any agreement between the parents or court order. In the case of a student whose legal guardian is an institution, a party independent of the institution, appointed under state and local law to give parental consent, may be allowed to do so.);
9. in compliance with judicial order or subpoena, provided that the student is notified in advance of the compliance unless the issuing court or agency has ordered that the existence or the contents of the subpoena or the information furnished not be disclosed; or
10. appropriate persons in connection with an emergency if such knowledge is necessary to protect the health or safety of a student or other persons.

NOTE: With the exception of MTSU officials and staff who have been determined by the University to have legitimate educational interests, all individuals and agencies who have requested or obtained access to a student's record (other than directory information) will be noted in a record which is kept with each student's Educational Record. A request must be in writing stating the purpose of the request. This record will also indicate specifically the legitimate interest that the persons or agency had in obtaining the information.

## Procedures for Accessing Educational Records

Eligible students have a right to inspect and review their Educational Records. To do so the student must request the custodian make the records available. The student may ask for an explanation and/or a copy of the record. (The price of the copies shall not exceed the cost of duplicating the record.) The records shall be made available within 45 days after the request. After consultation with the custodian the student may seek amendment of the records the student believes to be inaccurate, misleading, or otherwise in violation of the student's privacy rights. If there is a disagreement between the student and the custodian as to the correctness of the data contained in the record, the student may submit a request for a formal hearing. The request and the formal challenge to the content of the records must be presented in writing to the chair of the Student Appeals Committee. The chair shall call a meeting no later than 45 days after receipt of the written appeal and challenge. The committee will allow the student to present evidence to substantiate appeal and shall render a written decision to the student within 45 days after the meeting.

Complaints of alleged failure of the institution to comply with the Family Educational Rights and Privacy Act may be filed with the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202-4605.

NOTE: This procedure does not provide for a hearing to contest an academic grade.

## Exclusions

Right of access does not include

1. financial records of parents or any information therein;
2. confidential letters and statements of recommendation placed in the educational record of a student prior to January 1, 1975;
3. records to which access has been waived by a student. (This applies only if a student, upon request, is notified of the names of all
persons making confidential recommendations and if such recommendations are used solely for the purpose for which they were intended.)

## Destruction of Educational Records

Educational Records may be destroyed except that a student shall be granted access prior to destruction if such is requested.

## Informing Students

MTSU informs its students of the policy governing privacy rights of students' Educational Records by publishing the policy in the University catalogs. A listing of the types of records and related information follows.


## GRADUATE PROGRAMS

GJraduate degrees are planned to help fulfill specific purposes. Doctor of Philosophy and Doctor of Arts degrees are offered to educate university, community | college, and junior college teacher/scholars in the fields of English, history, chemistry, economics, and human performance. The Specialist in Education degree is offered to educate administrators, teachers, and counselors at advanced levels for elementary and secondary schools.

Four degrees- the M aster of Education, the M aster of Arts in Teaching, the Master of Science in Teaching, and the Master of Business Education - are offered to educate public school teachers, supervisors, counselors, and administrators. The Master of Arts and the Master of Science degrees are offered to prepare candidates for further graduate study and research, for teaching at the junior college level, for professional positions in a variety of fields, and for positions of leadership with state and federal agencies. The Master of Business Administration is offered to prepare candidates for leadership positions in business and industry, and the $M$ aster of Criminal Justice is offered to prepare leaders in the criminal justice system.

## Doctor of Philosophy Degree

Middle Tennessee State University offers the Doctor of Philosophy (Ph.D.) degree in Economics, English, and Human Performance. The Ph.D. degree is offered for the purpose of developing doctoral-level expertise combining pedagogy with scholarly achievement and research excellence (applied or theoretical) in the fields of economics, English, or human performance. Above all, the Ph.D. recipient from MTSU is a learned person who has acquired advanced academic skills and is well prepared to teach at the collegiate level, conduct independent scholarly investigation, and provide service to the private and public sectors associated with her/his academic discipline.

## Admission

General admission requirements for the Ph.D. degree may be found in the admission section of this catalog. Applicants for admission to this degree objective must hold a baccalaureate degree. Although a master's degree is not a general University requirement, each graduate program has the option of establishing such a requisite.

## University Requirements Leading to the Ph.D. Degree

Following are the minimum University requirements that must be met to be eligible for the granting of the Ph.D. degree. In addition, please note that each individual Ph.D. program has established distinct curricular requirements that are specific to that program. Please refer to the applicable graduate program section in this catalog.

## General Course and Credit Requirements

The required minimum is 60 semester hours of coursework with at least two-thirds of the program at the 7000 level. No more than 12 semester hours of dissertation research (course 7640) may be applied toward this 60 -hour requirement. If approved by the student's graduate advisor, up to 12 semester hours of coursework completed at the master's level may be applied toward this 60-hour requirement. In the case of a D.A. recipient from MTSU, additional hours may be applied toward the 60-hour requirement if recommended by the graduate advisor and approved by the dean of Graduate Studies.

## The 60-credit requirement must include the following:

a. At least 42 hours in discipline-specific coursework. Undergraduate or dual-listed 4000/5000 courses (or their equivalents) cannot be used toward this requirement.
b. At least 12 semester hours for the dissertation research (course 7640).
NOTE: Once a Ph.D. student has begun taking dissertation research, he/she is expected to enroll in at least 1 semester hour of dissertation research (exclusive of Summer semester) until the dissertation is completed. Thus, Ph.D. students normally enroll for more than 12 total semester hours of dissertation research.
c. At least six (6) semester hours (two courses) in an educational pedagogy core. MTSU recognizes that competency and understanding of current teaching strategies and technologies is an important component of a contemporary, well-rounded Ph.D. curriculum. Thus an educational core consisting of at least two 3-credit pedagogy courses is required. Please refer to the applicable graduate program section in this catalog for your specific pedagogy requirement.

## Additional Program Requirements

Each doctoral program establishes degree requirements which are specific to that discipline and may be in excess of the minimum University requirements. Students should consult the appropriate graduate program section in this catalog. The graduate advisor/director of each graduate program, in consultation with the advisory committee when relevant, may also specify additional requirements such as prerequisites, a reading knowledge of foreign language(s), a working knowledge of statistics, computer literacy, or specific courses related to graduate teaching assistantships or research assistantships.

## Pre-dissertation Advisory Committee

As soon as practicable, each Ph.D. student will be assigned a three-person advisory committee officially constituted by the dean of the College of Graduate Studies. The committee is recommended by the graduate advisor, in consultation with the student and the potential major professor. If warranted, the committee membership may be reconstituted upon a recommendation from the graduate advisor and approval by the dean of the College of Graduate Studies.
Beginning shortly after constitution of the advisory committee, the student should meet frequently with the committee members. The committee provides academic guidance to formulate a curricular plan best suited for the academic needs and interests of the student. This pre-candidacy stage permits optimal flexibility in the event of modified academic interests.

## Preliminary Examination

Each Ph.D. student may be required to take a preliminary examination administered by a graduate program. The examination will be used to assess specialized and general knowledge of the major area as well as writing skills. The results of the preliminary exam should be used, in part, to plan the student's academic program. To be eligible to take this preliminary examination, the student must be fully admitted to the College of Graduate Studies and to the graduate program. Programs may have additional requirements.

## Qualifying Examinations

The student must pass written and/or oral comprehensive qualifying examinations after having completed all coursework required for the Ph.D. degree (or when enrolled in the last course of the program of study, exclusive of the dissertation). The student must be in good academic standing and must have at least a 3.25 grade point average in all graduate work at the time the Intent to Schedule the Qualifying Examination form is filed. The qualifying examinations are intended to assess whether a candidate is qualified to continue in a doctoral program and advance to candidacy.
The written examinations are given at least one month before the close of the Fall, Spring, and/or Summer semesters. Permission for the Ph.D. student to schedule the qualifying examination requires the approval of the student's advisory committee and the dean of the College of Graduate Studies. Applications may be obtained from the Graduate Office or the department. The deadlines for submitting these applications may be found in the calendar section of this catalog.
A satisfactory or passing performance on the written and/or oral examinations means that the candidate is qualified to continue the program as planned. A less than satisfactory outcome on any component of the qualifying examinations may result in additional academic requirements and/or a reexamination. A re-examination may be given only once. A fail decision results in a recommendation to the dean of the College of Graduate Studies for academic dismissal. The student may appeal the dismissal recommendation, for cause, to the Appeal Subcommittee of the Graduate Council via the chair of the Graduate Council or the dean of the College of Graduate Studies.

## Written Qualifying Examination

1. The purpose of the written examination is to evaluate the candidate's overall knowledge of the field, integrative skills, ability to organize material, and competency in written expression. The maximum time limit for the written examination is eight hours.
2. The written examination is administered by the major department (i.e., the graduate program).
3. The graded written examinations are maintained in the department and are available to the student upon request.

## Oral Qualifying Examination

The oral examination is administered by the student's advisory committee and covers the candidate's area of specialization and general knowledge. The committee evaluates the candidate's breadth of knowledge of the field(s), integration and problem-solving skills, competency in oral expression, and potential for conducting independent research.

## Advancement to Candidacy

After having successfully completed the qualifying examination, the student must file an Advancement to Candidacy
application with the dean of the College of Graduate Studies. At this time the dissertation committee is formally constituted and usually has the same membership as the predissertation advisory committee, although this is not mandatory. For example, should the student's research area change, it may be relevant to replace one or more of the original advisory committee members with faculty better qualified to provide research mentoring in the new area of inquiry. The degree plan as approved by the student's advisory committee, as well as certification by the student's advisory committee of successful completion of the qualifying examinations, is listed on the Advancement to Candidacy form. Upon approval, the College of Graduate Studies will notify the applicant of advancement to candidacy.
Before an applicant is officially admitted to candidacy for the Ph.D. degree, the student must have satisfied the following requirements:

1. An Advancement to Candidacy form and an Intent to Graduate form must be filed by the deadlines published in the Graduate Catalog, the Schedule Book, and posted on department bulletin boards on campus. Normally, there are few extension exceptions granted if these forms are not submitted by the listed deadlines.
2. The student must have at least a 3.25 grade point average on all coursework listed on the candidacy forms as well as any other graduate work undertaken at Middle Tennessee State University within the specified time limit (10 years). Grades of D or F are not accepted for any graduate degree credit, and no more than seven (7) hours of C grade may count toward Ph.D. degree requirements. However, all C, D, and F grades will be included in the student's GPA computation, unless otherwise exempted by the University repeat policy.
3. The student's entire program, including the dissertation, must be acceptable to the dissertation committee, department chair and/or director of graduate studies, and the dean of the College of Graduate Studies.

## Defense of Dissertation

After the completion of the dissertation and all other prescribed work for the degree, candidates will be given a final oral examination dealing primarily with the dissertation and its relation to the candidate's major field of study. This examination will be conducted by the student's dissertation committee. All members must be present at the examination. If the student's performance on this examination is satisfactory as judged by the committee, all requirements for the degree will be completed upon approval of the dissertation, completion of all prescribed coursework (including all incompletes), and attainment of University minimums.

## Residency

Residency requirements will be established by each program, pending Graduate Council approval.

## Time Limit

There is a ten-year limit for completing all Ph.D. degree requirements. Thus, all coursework offered toward the doctoral degree as well as the dissertation must be completed within ten years after matriculation (i.e., the first semester of enrollment).

## Transfer Credits

Only coursework completed at an accredited institution that would count toward the doctorate there will be considered for approval as transfer credit toward the Doctor of Philosophy coursework requirement at MTSU. Additional information on transfer credit may be found in the section on academic regulations.


## Doctor of Arts Degree

Middle Tennessee State University offers the Doctor of Arts (D.A.) degree in Chemistry and History. An applicant for admission to this degree program must hold a master's degree from an accredited institution. The D.A. degree is offered for the purpose of developing doctoral-level expertise combining pedagogy with scholarly achievement (applied or theoretical) and research excellence in the fields of chemistry or history. The D.A. recipient is well prepared to teach at the collegiate level, including fulfilling professorial and similar advanced teaching positions. Above all, the D.A. recipient is a learned person who has demonstrated advanced educational leadership skills combined with the capacity to conduct independent scholarly investigation.

## Programs Leading to the D.A. Degree

There are two alternatives, as described below.

## Alternative I: Single Teaching Field

Forty-eight semester hours above the master's level with at least two-thirds of the program on the 7000 level. No more than 6 semester hours of dissertation research (course 7640) may apply to this 48-hour requirement. 5000-level courses may not be applied.
a. The major (teaching field) includes at least 24 semester hours of coursework, plus 6 semester hours of internship/externship, plus at least 6 semester hours for the dissertation research (course 7640).
NOTE: Once a doctoral student has begun taking dissertation research, he/she is expected to enroll in at least 1 semester hour of dissertation research until the dissertation is completed. Thus, doctoral students normally enroll for more than 6 semester hours of dissertation research.
b. The professional education core consists of at least 12 semester hours in higher education and must include courses FOED 7520 and 7560 and SPSE 7540 and 7550.

## Alternative II: Two Teaching Fields

Sixty semester hours above the master's level with at least two-thirds of the program on the 7000 level. No more than 6 semester hours of dissertation research (course 7640) may apply to this 60-hour requirement. 5000-level courses may not be applied.
a. The major (first teaching field) includes at least 18 semester hours of coursework in the field (i.e., chemistry and history); plus 6 semester hours of internship/externship, plus at least 6 semester hours for the dissertation research (course 7640).
NOTE: Once a doctoral student has begun taking dissertation research, she/he is expected to enroll in at least 1 semester hour of dissertation research until the dissertation is completed. Therefore doctoral students normally register for more than 6 semester hours of dissertation research.
b. The second teaching field consists of at least 18 semester hours of coursework in any discipline which has a master's program (except Administration and Supervision, Curriculum and Instruction, or Aerospace Education).
The fields of study from which the second teaching field may be selected are:

Accounting/Information Systems
Aerospace Administration
Biology
Business Administration
Business Education
Chemistry
Computer Information Systems
Computer Science
Criminal Justice
Economics
English
Exercise Science and Health Promotion

Foreign Languages
Health, Physical Education, Recreation
History
Human Sciences
Industrial Studies
Mass Communication
Mathematics
Music
Psychology
Reading
School Counseling
Sociology
Special Education
c. The professional education core consists of at least 12 semester hours in higher education and must include courses FOED 7520 and 7560 and SPSE 7540 and 7550.

## Advisory Committee

Each D.A. student has a three-person advisory committee constituted by the dean of the College of Graduate Studies; two are from the major field and one from higher education. The committee is recommended by the student in consultation with the graduate advisor. If a curriculum comprising a major teaching field and a secondary teaching field is chosen, a fourth member representing the secondary field is appointed. If warranted, the committee membership may be reconstituted upon the approval of the dean of the College of Graduate Studies.
Beginning with acceptance into the doctoral program, the student should meet frequently with the advisory committee. The committee provides academic guidance to formulate a curricular plan best suited for the needs and interests of the student. The pre-candidacy stage permits optimal flexibility in the event of modified academic interests. Once the student has a well-formulated plan, he/she should petition for advancement to candidacy. Advancement to candidacy must occur by the completion of 36 semester hours of coursework. (See advancement to candidacy, below.)

## Advancement to Candidacy

After having successfully completed a significant component of the curriculum (not to exceed 36 semester hours and including at least one course in the major and one in higher education), the student must file a Candidacy Form with the dean of the College of Graduate Studies. This degree plan, approved by the student's advisory committee, is listed on the Candidacy Form. The Graduate Office will notify the applicant after the degree plan has been approved. A student may not take the qualifying examination unless he/she has been advanced to candidacy.

## Qualifying Examinations

The qualifying examinations are intended to assess whether a candidate is qualified to continue in a doctoral program. At the appropriate point in the doctoral program, following advancement to candidacy, the candidate must pass written and oral qualifying examinations. D.A. programs generally require that the qualifying examinations be taken during the last semester of prescribed coursework exclusive of dissertation research.

These examinations are given at least one month before the close of the fall and spring semesters and summer session.
A satisfactory or passing performance on both the written and oral examinations means that the candidate is qualified to continue the program as planned. A less than satisfactory outcome on any phase(s) of the qualifying examination may result in additional academic requirements and/or a reexamination. A reexamination may be given only once. A second failing performance results in a recommendation to the dean of the College of Graduate Studies for academic dismissal. The student may appeal the dismissal recommendation, for cause, to the dean of the College of Graduate Studies.

## Written Qualifying Examination

1. For Alternative \#1, the written examination encompasses the candidate's major teaching field and higher education. The purpose of the written examination is to evaluate the candidate's overall knowledge of the field, integrative skills, ability to organize material, and competency in written expression. The maximum time limit for the written examinations is 12 hours: 8 hours in the major field and 4 hours in the higher education component.
2. For Alternative \#2, an additional maximum 4-hour examination in the second teaching field is required.
3. The examinations are administered by the major department and by higher education.
4. The graded examinations are filed in the department office for a period of five (5) years, and the student has the right of access to his/her graded examination.

## Oral Qualifying Examination

The oral examination is given by the candidate's advisory committee and covers the candidate's field of specialization and general knowledge. The committee evaluates the candidate's breadth of knowledge of the field(s), integration and problem-solving skills, competency in oral expression, and potential for conducting independent scholarly investigation.

## Dissertation Information

## Prospectus

1. The presentation of the dissertation prospectus is scheduled by the student in consultation with the dissertation committee as soon as practicable so as to enable the candidate to get a timely start on the research phase of the dissertation. In no event shall the prospectus presentation precede advancement to candidacy.
2. The prospectus must be distributed to all members of the dissertation (advisory) committee at least one week prior to the scheduled presentation.
3. The presentation of the dissertation prospectus is open to faculty.
4. The dissertation committee may impose additional conditions, such as requiring extra statistical analyses, revision of protocols, or knowledge of a foreign language appropriate for the dissertation research.
5. If relevant, the committee provides the candidate with procedures for requesting consent and clearance by the MTSU Institutional Review Board.
6. Immediately upon completion, the committee orally informs the candidate of its decision on the prospectus. The committee then provides the candidate with a written synopsis of the decision, including any applicable additional requirements, so as to minimize potential misunderstandings.

## Preparation of the Prospectus

The prospectus need not conform to a set series of conditions since each research investigation is unique. The dissertation committee should be consulted when the candidate is preparing the prospectus. However, the following may prove useful as guidelines:
Research Statement. This is a brief statement about the purpose of the research and the rationale for the study. It may also include reference to projected social, literary, or scientific impact, etc., to be realized by the study. Also included might be a brief description of the major subdivisions or aspects of the proposed study stated in general terms.
Hypothesis. A hypothesis is a tentative assumption of an anticipated outcome from among projections of (all) possible outcomes of a research investigation. The hypothesis is based on presumably valid conclusions and backed by previous scholarly evidence, i.e., there is a rationale for the hypothesis. The scholar's goal is to prove or disprove the hypothesis.
Research Protocol or Experimental Design. This is the methodology devised by the researcher to examine whether or not the hypothesis is correct. The methodology or testing is performed so as to generate data (facts) which are used either to prove or disprove the hypothesis. A note of caution-when data are generated which disagree with an investigator's hypothesis, a tendency of many young scholars is to attempt to explain why the data are incorrect since they don't fit the hypothesis. It is very important to accept the validity of one's data and, if necessary, generate a new hypothesis which then may be further examined.
Background and Significance of the Study. The theoretical and empirical framework of prior scholarly work related to the research proposal and to which the proposal is indebted should be determined. A short statement of the value of the study and of the possible applications of the results is advisable. Citation of a limited number of authorities may support the significance of the proposed study.
Definition of Terms. Technical terms or words and phrases having special meanings should be defined.
Basic Assumptions. Certain defensible assumptions may be necessary to reach a scholarly conclusion. A justification should be provided explaining the basis for any assumption made.
Data Collection (Materials and Methods). A complete, precise description should be given for all instruments, materials, devices, or sources of information used in the collection of data or generation of information. There should be a detailed step-by-step description of the ways in which data are to be collected (i.e., methodology). This description
should include detailed information of the data to be collected, the sources to be used, sampling procedures, if any, and any other information necessary to further clarify the procedure.
Data Analysis. It is necessary to describe precisely and specifically the way in which data are to be organized and analyzed. The steps and techniques used to analyze and interpret the data should be clearly described.

## The Dissertation

Each dissertation is unique and reflects the academic accomplishments of the author in consultation with the dissertation committee. Although the candidate should confer frequently with the dissertation committee for mentoring and advice, the dissertation is the primary means by which the candidate demonstrates proficiency as an independent scholar. Following are some guidelines that may prove useful:

1. The dissertation (research project) should be strongly based upon the discipline, but it should also have relevance to pedagogy.
2. The research may be a restudy of problems with variations in new and different settings, a reevaluation of prior research, or the generation of new and original scholarly information.
3. The research should combine creativity with originality.
4. For additional information, the student may wish to consult the Guide to the Preparation of Theses and Dissertations, produced by the Tennessee Conference of Graduate Schools. It is available for perusal in the Office of Graduate Studies.

## Defense of Dissertation-Final Examination

1. Upon completion of the dissertation, the dissertation committee will hold an oral examination (often called the dissertation defense) which deals with the dissertation. However, the committee may designate any other aspect of the candidate's program for examination.
2. Arrangements for this examination are made by the student in consultation with the major professor.
3. This oral examination may be open to the public.
4. The defense of dissertation is normally held during the same semester as the anticipated conferral of the degree.
5. The dean of the College of Graduate Studies must be notified by the major professor, in writing, of the outcome of the final examination/dissertation defense.

## Filing the Dissertation

1. The completed dissertation should follow a general format as outlined by the College of Graduate Studies; however, there is considerable flexibility so that the author may use a format consistent with that of leading journals representative of the discipline.
2. Before submission to the dean of the College of Graduate Studies, the completed dissertation must be approved by the entire advisory committee and the department chair in the following order: major advisor, second member from the major field, professor of higher education, and chair of the major department. When a second
teaching field is involved (Alternative \#2), that advisor's name should be inserted prior to that of the professor of higher education.
3. The completed dissertation must be filed in the office of the dean of the College of Graduate Studies by the deadline set for accepting theses, dissertations, and research projects. The deadline(s) are found in the calendar section of this catalog and in the current class schedule book.
4. Upon receipt of the original and four copies of the dissertation by the Office of Graduate Studies, they are sent to the bindery. Each of the five approval pages must bear original signatures. Two copies are filed in the MTSU Library. One copy will be filed in the major department, one with the major professor, and one with the candidate. Laser print may be used if it is of professional quality. Letter grade copy paper will suffice; the copies need not be on bond paper.

## Dissertation Abstract

The dissertation must include an abstract of the treatise which should not exceed 350 words.

## Other Information

In addition to the materials found below, the reader should refer to the Glossary section in this catalog for additional important information relative to graduate education at MTSU.

## Checklist for the

## Semester of Intended Graduation

1. By the end of the second week of the term or by the end of the first week of Session II (for August graduation), the candidate files an Intent to Graduate Form with the College of Graduate Studies and relevant fees are paid. There is an additional charge if more than five copies of the dissertation are to be bound.
2. The final examination (oral defense of dissertation) is administered.
3. If the defense is satisfactory, the dissertation is filed with the Graduate Office no later than 30 days prior to the intended graduation date. Final authority for approval of the dissertation rests with the dean of the College of Graduate Studies.

## Time Limit

After matriculation, there is a ten-year time limit for completing all D.A. degree requirements.

## Transfer Credits

Only coursework completed at a doctoral institution that would count toward the doctorate there will be considered for approval as transfer credit toward the Doctor of Arts coursework requirement at MTSU. Additional information on transfer credit is given in the section on academic regulations.

## General Information for Specialist's and Master's Students

In addition to the materials found below, the reader should refer to the Glossary section in this catalog for additional important information relative to graduate education at MTSU.

## Admission Requirements

Applicants must meet the admission requirements for de-gree-seeking students and submit any additional materials required by the major program of study. (See relevant department for specific requirements.)

Admission is granted to a specific program of study and a student may not change the major, the concentration, or the minor without a recommendation by the relevant graduate advisor(s) and the written approval of the dean of the College of Graduate Studies.
All applicants must hold a bachelor's degree from an accredited university. In addition, applicants for the Ed.S. degree must also hold a master's degree from an accredited university.

## Advancement to Candidacy

Advancement to candidacy signifies that a student has successfully completed a substantial portion of the graduate program and, in consultation with the graduate advisor, has established a curricular plan to follow for the purpose of graduation. The Candidacy Form must be filed and approved prior to the completion of 24 credit hours (or earlier if required by the graduate program). The form is approved by the pertinent graduate program personnel (e.g., major professor, graduate advisor, etc.) and the dean of the College of Graduate Studies (or designee).
M.A.T. and M.S.T. Candidacy Forms must also be signed by the dean of the College of Education and Behavioral Science or an appropriate representative if licensure is being sought. The Candidacy Form for the M.Ed. requires that the student have a professional license to teach and thus must also be signed by the dean of the College of Education and Behavioral Science or an appropriate representative.

For students pursuing either a second master's or specialist's degree at MTSU, the Candidacy Form should be filed prior to the completion of 18 credit hours of course work.

## Candidacy Change

If for any reason the courses listed on the Candidacy Form cannot be followed, a Change of Candidacy Form must be
filed with the dean of the College of Graduate Studies. This must be approved by the major professor, reader(s), and/or faculty advisors.

## Comprehensive Examinations

The comprehensive examinations are scheduled by each department during the last part of the semester in which the student expects to graduate. These may be oral, written, or both. This test is not merely a re-examination of coursework, but it is an assessment of the candidate's ability to integrate scholarly information linking the major and related fields. The comprehensive examinations may be taken no more than twice.

## Faculty Advisors

After admission, a degree-seeking student is assigned faculty advisors in the major and minor areas. The student should consult these advisors for program planning and optimal course scheduling.

## Intent to Graduate

By the end of the first full week of the term in which the student intends to graduate, or by the end of the first week of Summer Session II (for August graduation), the candidate must file an Intent to Graduate Form with the College of Graduate Studies, pay relevant fees at the Business Office, and complete the College of Graduate Studies exit survey.

## Thesis

The thesis in final form must be submitted to the dean of the College of Graduate Studies no later than 30 days before graduation. It must be approved by the major professor, the reader(s), and the department chair. Guidelines for the thesis vary from department to department. The primary responsibility for form, content, and style rests with the student and major professor. Nonetheless, a thesis not meeting standards may be rejected by the dean of the College of Graduate Studies and graduation delayed. The original and three copies of the thesis must be submitted for binding. One copy is forwarded to the library, one to the major professor, one to the department, and one is returned to the student. Additional fees must be paid if extra copies are bound.
NOTE: Once the student has begun taking thesis research, he/she is expected to enroll in at least 1 semester hour of thesis research (course 6640) until the thesis is completed.

## Specialist in Education Degree

Middle Tennessee State University offers the Specialist in Education (Ed.S.) degree in Administration and Supervision and in Curriculum and Instruction. The Ed.S. is provided specifically for teachers, counselors, and administrators wishing to pursue graduate study beyond the master's level. The Ed.S. in Administration and Supervision is available through the Department of Educational Leadership. The Ed.S. in Curriculum and Instruction is offered by both the Department of Educational Leadership and the Department of Elementary and Special Education. The Ed.S. in Curriculum and Instruction with a concentration in School Psychology is offered by the Department of Psychology.

## Common Requirements for All Specialist's Degree Programs

All specialist's candidates must

1. complete all applicable coursework after receipt of the master's degree.
2. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours. No courses at the 5000-level or lower may apply toward the specialist's degree.
3. successfully complete a written (and/or oral) comprehensive examination. The examination may be taken no more than twice.
4. complete all specific graduate program requirements. These additional specific degree requirements are found under the applicable department.

## Second Specialist's Degree from MTSU

An individual who has received one specialist's degree from MTSU may obtain a second specialist's degree with a minimum of 24 additional semester hours of graduate coursework earned at MTSU if approved in advance by the graduate program and the graduate dean. No transfer coursework is accepted towards the second specialist's degree. All specific course requirements must be met for the second degree (except FOED 7060, Seminar in Educational Foundations, and SPSE 7130, The Curriculum: Structures and Functions), including the written comprehensive examinations and thesis (if relevant). All semester hours must be earned after the first specialist's degree has been conferred.

## The Master's Program

Middle Tennessee State University offers nine different master's degrees, thirty master's programs, and thirtyseven master's programs with specific concentrations. These include the Master of Arts (M.A.), the Master of Arts in Teaching (M.A.T.), the Master of Business Administration (M.B.A.), the Master of Business Education (M.B.E.), the Master of Criminal Justice (M.C.J.), the Master of Education (M.Ed.), the Master of Science (M.S.), and the Master of Science in Teaching (M.S.T.).

## Common Requirements for all Master's Degree Programs

All master's candidates must

1. satisfactorily complete the undergraduate prerequisites.
2. complete a minimum of 30 (or more) semester hours of graduate coursework. No more than 30 percent of the total degree hours may be dually listed as undergraduate/graduate hours. No undergraduate courses may apply toward the graduate program requirements. If a thesis is required, normally no more than three hours will apply toward the 30 (or more) semester hour program requirement. However, additional semester hours of thesis research (6640) may be taken and will appear on the student's transcript.
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
4. successfully complete a written (and/or oral) comprehensive examination; the examination may be taken no more than twice.
5. complete all specific graduate program requirements.

## Programs Leading to the M.A. Degree

There are six departments offering programs leading to the Master of Arts degree. They are Economics and Finance, English, History, Music, Psychology, and Sociology and Anthropology.
Normally, the Master of Arts degree requires a thesis; however, graduate programs in English, Economics and Finance, and Music include a non-thesis option requiring more than 30 semester hours. (Specific program requirements may be found under the appropriate department.)

## Program Leading to the M.A.T. Degree

The Master of Arts in Teaching degree is offered in Foreign Languages. The degree should be pursued by those individuals interested in teaching. Admission is open to licensed teachers as well as those seeking initial licensure. Specific degree requirements are found under the Department of Foreign Languages and Literatures.

## Program Leading to the M.B.A. Degree

The Master of Business Administration program includes courses in the following six areas of business: accounting, economics, finance, management, marketing, and information systems. Specific degree requirements are found under Business Administration.

## Program Leading to the M.B.E. Degree

A Master of Business Education (M.B.E.) degree program is offered by the Department of Business Education, Marketing Education, and Office Management (BMOM) in the Jennings A. Jones College of Business. Specific degree requirements are found under the Department of BMOM.

## Program Leading to the M.C.J. Degree

The Master of Criminal Justice degree program is a joint program with Tennessee State University. Students may seek professional employment in the operational agencies in the field of criminal justice or pursue relevant research or teaching positions. Eighteen semester hours credit from each university is required. Applicants must complete a special application specifically for this degree program. Specific degree requirements are found under the Department of Criminal Justice Administration.

## Programs Leading to the M.Ed. Degree

There are four departments offering programs leading to the Master of Education degree. The M.Ed. degree provides programs of study in Administration and Supervision, Aerospace Education, Curriculum and Instruction, School Counseling, Reading, and Special Education. Specific degree requirements are found under the Department of Aerospace, Department of Educational Leadership, Department of Elementary and Special Education, and Department of Psychology.

## Programs Leading to the M.S. Degree

There are eleven departments and/or colleges offering programs leading to the Master of Science degree. The University offers the Master of Science degree in Accounting/Information Systems; Aviation Administration; Biology; Chemistry; Computer Science; Exercise Science and Health Promotion; Health, Physical Education, Recreation; Human Sciences; Industrial Studies; Mass Communication; and Mathematics. Specific degree requirements are found under the applicable department.
Normally, the Master of Science degree requires a thesis; however, graduate programs in Computer Science; Exercise Science and Health Promotion; Health, Physical Education, Recreation; Industrial Studies; Mass Communication; and Mathematics include a non-thesis option requiring more than 30 semester hours. (Specific program requirements may be found under the appropriate department.)

## Programs Leading to the M.S.T. Degree

The Master of Science in Teaching degree is offered by the Department of Mathematical Sciences. The degree should be pursued by those individuals interested in teaching. Admission is open to licensed teachers as well as those seeking initial licensure. Specific degree requirements are found under the Department of Mathematical Sciences.

## Second Master's Degree from MTSU

An individual who has received one master's degree from MTSU may obtain a second master's degree with a minimum of 24 semester hours of coursework earned at MTSU if approved in advance by the graduate program and the graduate dean. No transfer coursework is accepted towards the second master's degree. All specific course requirements must be met for the second degree, including the written comprehensive examinations and thesis (if relevant). All semester hours must be earned after the first master's degree has been conferred.


## Graduate Certificate Programs

Graduate certificate programs provide advanced study beyond the baccalaureate degree and are intended as both professional development and as an intermediate step towards a desired graduate degree. Middle Tennessee State University offers seven graduate certificates: Art Education, Critical Care Nursing, Dyslexic Studies, Geoscience, Gerontology, Health Care Management, and Nursing Informatics. The Gerontology, Health Care Management, and Dyslexic Studies certificates are interdisciplinary programs involving courses and faculty in multiple MTSU departments.

## Requirements

Prospective students should apply to the Graduate School. Once a student is admitted to the graduate school, his or her application is transmitted to the director of the individual certificate program for admission consideration. For admission to the interdisciplinary graduate certificate programs in Gerontology and Health Care Management, students must possess a bachelor's degree with an undergraduate grade point average of 2.75 ( 4.0 scale) and are required to submit a letter demonstrating their interest, detailing prior field experience, and outlining career goals and aspirations.
Students enrolled in the certificate program must comply with existing policies applicable to all graduate programs at MTSU. The time limit for use of credit toward the certificate is six years from the date of enrollment in the earliest course applied toward the certificate, including transferred courses. Students must maintain a cumulative graduate grade point average of 3.00 in courses leading to the certificate. Students may transfer up to six (6) credit hours of approved coursework into the certificate program.

## Art Education

The graduate certificate in Art Education provides advanced study for professionals in public and private education, museums, and other visual art arenas who wish to gain a contemporary understanding of the field of art education while earning credits for career advancement. Specific requirements for the certificate in Art Education are found on page 64.

## Critical Care Nursing

The goal of the graduate certificate program in Critical Care Nursing is to provide advanced knowledge and critical thinking skills to prepare the professional nurse to manage patients with complex health problems in the critical care environment. Students are required to complete 18 hours of graduate nursing courses. Specific course and program requirements are found on page 151.

## Geoscience

The Department of Geosciences offers a graduate certificate in Geoscience that consists of 12-16 hours taken from a variety of geography and geology courses. The certificate in Geoscience should be of particular interest to those in the private sector, K-12 and community college education, and government agencies. The department also offers a minor at the graduate level and hours taken in the certificate program normally can be applied toward the minor requirements. Specific requirements for the certificate in Geoscience are found on page 115.

## Nursing Informatics

A graduate certificate in Nursing Informatics is offered to prepare baccalaureate nurses functioning in informatics-related roles with the additional skills and knowledge related to the practice of nursing informatics and to prepare advanced practice nurses with the skills and knowledge for leadership in emerging informatics roles within health care organizations. Specific requirements for the certificate in Nursing Informatics are found on page 151.

## Interdisciplinary Certificate Programs

## Dyslexic Studies

The graduate certificate program in Dyslexic Studies is rooted in the research base that defines dyslexia and guides identification. It examines content and strategies for intervention. Prerequisites for admission are a certificate in some field integral to P-12 education, documentation of three or more years of successful experience in the career field, and permission of the program advisor. Candidates must be admitted to the College of Graduate Studies; present a letter of recommendation from a principal or supervisor; and submit a letter detailing professional experience, positions held, and motivation for studying dyslexia. See course descriptions on page 103.

## Total required minimum hours: 18

| Requirements |  |  |
| :---: | :---: | :---: |
| DYST | 6000 | Introduction to Dyslexia |
| PSY | 6530 | Psychology of Reading and Reading Development |
| BIOL | 6740 | Brain Development and Learning Disabilities |
| CDIS | 5000 | Language Development, Speech, and Literacy |
| DYST | 6010 | Identifying Students with Dyslexia |
| DYST | 6011 | Interventions for Dyslexia |
| DYST | 6012 | Multisensory Teaching Strategies |
| DYST | 6013 | Practicum in Multisensory Teaching |
| DYST | 6020 | Adolescents with Dyslexia and Other Literary Difficulties |

For more information, contact Diane J. Sawyer, director of the Tennessee Center for the Study and Treatment of Dyslexia, at (615) 898-5642 or dsawyer@mtsu.edu.

## Gerontology

The certificate program in Gerontology provides supplementary education in gerontology for students preparing for careers in a broad range of positions. This program is also designed to give those already working in the field an opportu-
nity to enrich existing skills and knowledge and to provide further opportunities for career advancement.

## Total required minimum hours: 18

| Core Requirements: 6 hours |  |  |
| :---: | :---: | :---: |
| SOC | 6550 | Seminar on Aging |
| SOC | 6900 | Practicum: Applied Analysis* |
| *NOTE: All students are required to complete this capstone experience during their last semester of coursework. |  |  |
| Remaining hours are to be selected from the following courses in conjunction with career goals and aspirations. |  |  |
|  |  |  |
| CDFS | 5390 | Families in Later Life |
| CDIS | 5800 | Speech, Language, and Auditory Problems of the Aged |
| REC | 5380 | Introduction to Recreation for Persons with Disability |
| REC | 5470 | Leisure and Aging |
| N FS | 5210 | Nutrition in Aging |
| PSY | 5610 | Adult Psychology and Aging |
| PSY | 5630 | Death and Dying |
| SOC | 5020 | Sociology of Aging |
| SOC | 5030 | Topics in Gerontology |
| SOC | 5040 | Health Care Delivery Issues |
| SOC | 6660 | Program Management and Evaluation |
| SOC | 6670 | Mental Health and Aging |
| SOC | 6680 | Counseling Elders |

For more information, contact Ron Aday in the Aging Studies Program at (615) 898-2693.

## Health Care Management

The curriculum is designed to

1. offer support for individuals interested in the health care field who may or may not want to pursue a graduate degree to obtain recognition for a coherent body of graduate level study in the field of health care management.
2. provide for interdisciplinary collaboration in teaching, learning, and practice.
3. encourage qualified students to pursue graduate degrees related to their specific field of interest or practice.

## Total required minimum hours: 18

## Core Requirements: 9 hours

| MGMT | 6000 | Management and Operations Concepts |
| :--- | :--- | :--- |
| MGMT | 6780 | Health Care Management |
| SOC | 5040 | Health Care Delivery Issues |

Remaining hours are to be selected from the following courses in conjunction with career goals and aspirations.

| BLAW | 6430 | Legal Environment of Management |
| :--- | :--- | :--- |
| ECON | 6400 | Economics of Health Care |
| HLTH | 6510 | The Nation's Health |
| HLTH | 6850 | Methods in Epidemiology |
| HLTH | 6860 | Program Planning for Health Promotion |
| MGMT | 6750 | Business Ethics |
| MKT | 6900 | Health Care Marketing |
| NURS | 5035 | Special Topics |
| NURS | 5055 | Informatics for the Health Care Professional |
| SOC | 5020 | Sociology of Aging |
| SOC | 5030 | Topics in Gerontology |
| SOC | 5040 | Health Care Delivery Issues |

For more information, contact the Center for Health and Human Services at (615) 898-5950.

## Academic Abbreviations

| AAS | African American Studies |
| :---: | :---: |
| ACA | Academic Success Program |
| ACSI | Actuarial Sciences |
| ACTG | Accounting |
| ADV | Advertising |
| AERO | Aerospace |
| ABAS | Agribusiness and Agriscience |
| ANTH | Anthropology |
| ART | Art |
| A S | Aging Studies |
| ASTL | Advanced Studies in Teaching and Learning |
| ASTR | Astronomy |
| ATHC | Athletic Coaching |
| ATHT | Athletic Training |
| B AD | Business Administration |
| BIOL | Biology |
| BLAW | Business Law |
| BMOM | Business Education, Marketing Education, and Office Management |
| CDFS | Child Development and Family Studies |
| CDIS | Communication Disorders |
| CHEM | Chemistry |
| CIM | Concrete Industry Management |
| CJA | Criminal Justice Administration |
| CM | Construction Management |
| COED | Cooperative Education |
| COMM | Communication (Speech) |
| CSCI | Computer Science |
| DANC | Dance |
| DSPM | Developmental Studies Math |
| DSPR | Developmental Studies Reading |
| DSPS | Developmental Studies Learning Strategies |
| DSPW | Developmental Studies English |
| DYST | Dyslexic Studies |
| ECON | Economics |
| ELED | Elementary Education |
| EMC | Electronic Media Communication |
| ENGL | English |
| EST | Environmental Science and Technology |
| ET | Engineering Technology |
| ETIS | Engineering Technology and Industrial Studies |
| EXSC | Exercise Science |
| FCSE | Family and Consumer Sciences Education |
| FIN | Finance |
| F L | Foreign Languages |
| FOED | Foundations of Education |
| FREN | French |
| GEOG | Geography |
| GEOL | Geology |
| GERM | German |
| GRAF | Media Design/Graphics |
| G S | Global Studies |
| H SC | Human Sciences |
| HIST | History |
| HLTH | Health |
| HPER | Health, Physical Education, Recreation/ Human Performance |


| HUM | Humanities |
| :---: | :---: |
| IDES | Interior Design |
| IED | Industrial Education |
| INFS | Computer Information Systems |
| ITAL | Italian |
| JAPN | Japanese |
| JOUR | Journalism |
| LATN | Latin |
| LIBS | Library Science |
| MATH | Mathematics |
| M C | Mass Communication |
| MGMT | Management |
| MKT | Marketing |
| M S | Military Science |
| MUAP | Applied Music |
| MUED | Music Education |
| MUEN | Music Ensembles |
| MUHL | Music History and Literature |
| MUPD | Music Pedagogy |
| MUS | Music |
| MUTH | Music Theory |
| N FS | Nutrition and Food Science |
| NURS | Nursing |
| ORCO | Organizational Communication |
| P R | Public Relations |
| P S | Political Science |
| PHED | Physical Education |
| PHIL | Philosophy |
| PHOT | Photography |
| PHYS | Physics |
| PLEG | Paralegal Studies |
| PORT | Portuguese |
| PRSE | Professional Seminar |
| PSCI | Physical Science |
| PSY | Psychology |
| Q M | Quantitative Methods |
| READ | Reading |
| REC | Recreation |
| RIM | Recording Industry |
| R S | Religious Studies |
| RUSS | Russian |
| SAFE | Safety |
| SPED | Special Education |
| SOC | Sociology |
| SPAN | Spanish |
| SPSE | School Personnel Service Education |
| STAT | Statistics |
| S W | Social Work |
| TELC | Education |
| THEA | Theatre |
| TRNS | Transportation |
| TXMD | Textiles, Merchandising, and Design |
| U H | University Honors |
| UNIV | University 1010 |
| VTE | Vocational-Technical Education |
| WMST | Women's Studies |
| YOED | Youth Education |

## DEPARTMENTS AND DEGREE PROGRAMS

## S

 tudents of the Graduate College are expected to demonstrate superior talent, high motivation, and dedication to advancing the goals of the University. These goals include an emphasis on academic excellence, teaching distinction, public service, research, expanding economic opportunity, cultural preservation, and quality of life. To achieve those ends the University seeks outstanding, highly motivated students.The following section describes the academic departments and/or divisions which offer majors and minors for graduate degrees. Included are specific degree program requirements and information and course descriptions.

# Department of Accounting 

## Paula Thomas, Chair <br> Business and Aerospace Building N425C

The mission of the Master of Science degree program in Accounting and Information Systems is to provide a flexible and focused program that prepares students for professional jobs in accounting and other related fields. The program is designed to offer students opportunities to obtain knowledge in nonaccounting areas to support their career development. Fulfilling this mission requires that faculty members enhance and broaden their skills through academic and professional research, service to the profession, and educational development.
The Department of Accounting offers the Master of Science in Accounting and Information Systems with accounting as the primary field and courses for the Master of Business Administration degree. A minor in Accounting is offered for students seeking a master's degree other than the M.B.A. The accounting graduate coordinator serves as advisor for students choosing Accounting as their primary field.

Students are encouraged to take advantage of the opportunity to take a balance of accounting and information systems courses; however, there is significant flexibility in the requirements to allow a student's program to be specialized to the extent desired for particular career goals.
The prerequisites for a student seeking an M.S. degree in the department are the same as those required for the M.B.A. degree (see page 65), plus instruction in international business. A recent graduate of an AACSBaccredited program would normally possess an adequate background in these prerequisites. A student electing accounting as a primary field must complete an additional 21 hours of prerequisites including Financial Accounting and Reporting I and II, ACTG 3110 and 3120; Cost Accounting, ACTG 3310; Accounting Systems, ACTG 4510; Federal Taxes I, ACTG 4530; External Auditing I or Internal Auditing, 4620 or 4640; and Business Policy, B AD 4980.
To be admitted to the M.S. program (see page 27), a student must meet one of the following:
a. GPA $\times 200+$ GMAT $=950$
or Upper Division GPA $\times 200+$ GMAT $=1,000$
b. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of $\mathbf{B}$ or higher,
admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a $\mathbf{B}$ average.

The M.S. with Accounting concentration fulfills the requirement to sit for the CPA exam in Tennessee.

## Requirements for the Master of Science Degree

## Accounting as Primary Field; Information Systems as Secondary Field

## Required

ACTG 6650 Advanced Accounting Theory
INFS 6610 Information Systems Management and Applications

## Electives

Three hours in INFS at the 5000 or 6000 level
Three hours in ACTG at the 5000 or 6000 level
Nine hours in ACTG at the 6000 level
Six hours of approved electives at the 6000 level
Three hours in international/global at the 6000 level

## Additional Requirements

Candidates must pass a comprehensive written examination upon the completion of course requirements.
The degree is to be completed within six years from the time of admission to the degree program.
No foreign language or thesis is required in the program.
NOTE: Students who have credit for the undergraduate equivalent of the 5000-level course are not permitted to enroll in the 5000-level course for credit.

## Courses in Accounting [ACTG]

5310 Advanced Cost Accounting. Three credits. Prerequisites: ACTG 3310 with a minimum grade of C and Q M 3620 . In-depth analysis of costs, quantitative concepts relating to management objectives, control, and planning. Application of statistical techniques to solve managerial accounting problems. Heavy use of technology and communications for solving various accounting situations.

5510 Accounting Systems. Three credits. Prerequisites: ACTG 3020 or 3310 and INFS 2200 or consent of department chair. Current developments in establishment of complete accounting systems and the application of principles to typical business organizations. Special emphasis on accounting cycles, controls, and database design.

5530 Federal Taxes I. Three credits. Prerequisites: Graduate standing and permission of department chair. Addresses determination of taxable income for individuals; federal income tax returns and research methods.

5540 Federal Taxes II. Three credits. Prerequisite: ACTG 4530 (5530) with minimum grade of $C$ or consent of instructor. Structure of taxation for corporations, partnerships, estates, trusts, gifts; returns and research.

5570 International Accounting. Three credits. Prerequisite: ACTG 2120 or equivalent with C or better. Development of accounting systems and entrepreneurial practices in various countries, specific international financial reporting issues, international financial statement analysis, managerial accounting issues for global businesses including budgeting and control, and international taxation issues.

5610 Governmental Accounting and Reporting. Three credits. Prerequisite: ACTG 3120 with a minimum grade of C. State and local government accounting principles and procedures; classifications of accounts for budgetary and financial reporting; accounting for revenues and expenditures or expenses; reporting for funds and the governmental entity; and auditing the governmental entity.

5630 External Auditing II. Three credits. Prerequisite: ACTG 4620 or equivalent with a minimum grade of C. Audit procedures used in tests of controls and in substantive tests for the major transaction cycles by using both microcomputer and statistical sampling.

5640 Internal Auditing. Three credits. Prerequisite: ACTG 3120 with a minimum grade of C . Introduction to the field of internal auditing. Primary focus on data gathering and report writing unique to internal auditing.

5650 Accounting Theory. Three credits. Prerequisite: ACTG 3120 with minimum grade of C (or taken concurrently). Analysis of propositions, axioms, theorems, controversial accounting concepts, authoritative statements, and research on accounting principles.

5660 Experiences in Financial Reporting. Three credits. Prerequisite: ACTG 3120 with a minimum grade of C. Focus on applying accounting and reporting requirements to selected financial reporting issues and cases. Credit not allowed in ACTG 5660 if student has credit in ACTG 4650 or 5650.

5680 Forensic Accountancy and Fraud Auditing. Three credits. Prerequisite: ACTG 4620 or 4640 or approval of department chair. Practice of forensic accounting, i.e., nontraditional investigative aspects of accountancy (e.g., litigation support, business interruptions, etc.); emphasis on fraud prevention and the detection of fraudulent intent to obtain improper individual or group gains.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

6000 Survey of Accounting Principles. Two credits. The accounting cycle, financial statements, accounting systems, use of accounting information for managerial decision-making purposes and problem solving. Not open to students with undergraduate accounting backgrounds. May not be used for elective credit in graduate business degree programs.

6310 Advanced Cost Accounting, Budgeting, and Controllership. Three credits. Prerequisite: ACTG 3020 or 3310 or 6910 . Recent conceptual and analytic development in cost accounting, budgeting, and controllership. Includes principles and procedures in preparation of business budgets and methods of accounting for managerial control of cost of production, distribution, and administration through the use of standards.

6510 Federal Income Tax Research and Planning. Three credits. Prerequisites: ACTG 4530/5530 and 4540/5540 or consent of in-
structor. Skillful application of tax research methodology in the use of primary tax authority, secondary tax reference materials, and research aids. Research through practice in the use of materials available in the tax library.

6550 U.S. International Taxation. Three credits. Prerequisites: ACTG 4530/5530 and 4540/5540. Basic concepts of U.S. taxation of international transactions. Topics include sourcing of income from foreign activities, Subpart F income, selecting the proper vehicle for foreign investments, and computing foreign tax credits.

6610 Advanced Governmental and Nonprofit Accounting and Reporting. Three credits. Prerequisites: ACTG 3120 and 4610 (5610) with a minimum grade of C. State and local government accounting principles and procedures; accounting and reporting for state and local governments, colleges and universities, hospitals, and nonprofit organizations. Auditing practices for all these organizations.

6650 Advanced Accounting Theory. Three credits. Prerequisite: Consent of department chair. History and development of accountancy, tax structures, and industrial development of past, present, and projected societies including relevant research into current controversial issues. Extensive research required. Required for M.S. in Accounting/Information Systems with accounting as the primary field.

6660 Advanced Financial Accounting and Reporting Problems. Three credits. Prerequisite: Accounting major or consent of instructor. Application of theoretical concepts and promulgations of authoritative bodies to financial accounting and financial reporting situations encountered in practice.

6720 Advanced Auditing and Public Accounting Practices. Three credits. Prerequisite: ACTG 4620 or consent of department chair. Critical analysis of techniques used in auditing, method of data collection, and nature of audit evidence. Includes modern and relevant statistical and social research techniques and computer use as applied to the various steps in audit practices and procedures.

6810 Empirical Methods in Accounting. Three credits. Prerequisites: Foundation requirements and consent of instructor. Independent study and research on topics in or related to accounting under supervision of graduate faculty.

6910 Accounting and Business Decisions. Three credits. Prerequisite: ACTG 2120 or equivalent. Accounting concepts and their application to the decision-making process. Research reports on a variety of financial and managerial accounting topics prepared and presented orally by the student. Not open to students with undergraduate major in accounting.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Course in Business Law [BLAW]

6430 Legal Environment of Management. Two credits. Legal rights and potential liabilities of business managers. Presentation of the legal, ethical, and political environment of business. Includes basic principles of the legal system, torts and product liability, antitrust, labor and employment laws, securities, contracts, sales, secured transactions, bankruptcy, agency, partnerships, corporations, and commercial paper. May not be used for elective credit in graduate business degree programs.

# Department of Aerospace 

Paul Craig, Chair<br>Business and Aerospace Building S211C

The Department of Aerospace offers the Master of Science (M.S.) in Aviation Administration, with a concentration in Airline/Airport Management or Aviation Asset Management, and a Master of Education (M.Ed.) in Aerospace Education.

## Requirements for the Master of ScienceAviation Administration Major

Normally the required minimum test score for admission to this program is 800 on the Graduate Record Examination or 38 on the Miller Analogies Test.
Candidate must

1. have graduated from an accredited four-year college or university to be considered for unconditional admission. Transcripts must reflect 6 hours of research tool-related coursework (e.g., statistics, computer science, etc.) and 18 semester hours of one of the following disciplines: accounting, aviation, business, or information systems. Demonstrated knowledge equivalent to that obtainable through the undergraduate core curriculum in Aerospace may be substituted for up to 15 of the 18 required semester hours. The aviation coursework must include 6 semester hours in at least two of the following areas: airline or airport management, aviation asset management, fixed-base operations or theory of flight. Applicants with undergraduate majors in fields other than aviation who have not completed a college-level flight theory course, or who do not possess Federal Aviation Administration or military-issued pilot credentials, will be required to enroll in AERO 1020 (Theory of Flight) during their first semester after admission to the M.S. degree program.
2. complete 36 semester hours consisting of a 15-hour core, 12 hours in the chosen concentration, 6 hours of electives, and a 3-hour thesis with a cumulative GPA of 3.0 or greater. If necessary, an additional 3 hours may be taken to complete the thesis; however, these hours may not be applied toward elective requirements.
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
4. successfully complete a written comprehensive examination (may be taken no more than twice).
5. successfully complete a thesis defense.

NOTE: Applicants meeting the above criteria whose cumulative GPA is less than 3.00 but at least 2.75 and who present other qualities deemed valuable by the aviation industry, as determined by the Graduate Program Committee, may be conditionally accepted with academic probationary status.

Students with probationary status who fail to achieve and maintain a 3.0 GPA will be suspended from the M.S. degree program.

## Airline/Airport Management Concentration

## Required Courses

AERO 6120 Aviation History
AERO 6150 Aviation Industrie
STAT 6160 Statistics OR
Q M 6000 Quantitative Methods Survey
AERO 6300 Air Transportation Systems
AERO 6610 Introduction to Aerospace Research
AERO 6640 Thesis Research
Electives $\mathbf{- 1 2}$ hours from the following:
AERO 6130 Safety Administration and Security
AERO 6170 Scheduled Air Carrier Operations
AERO 6190 Airport Organizational Structures and Operational Activities
AERO 6220 Environmental Policy
AERO 6250 Aviation Policy and Planning
AERO 6270 Airport Design
AERO 6330 International Aviation Systems
AERO 6350 General Aviation
AERO 6370 Aviation Contracts and Leases
AERO 6450 Airport Funding Policy
INFS 6610 Information Systems Management and Applications OR
INFS 5200 Data Enhanced Internet Applications

## Guided Electives

Students will select 6 hours of approved electives suited to their career goals from another department within the University. Selection will be made with appropriate guidance from faculty of both departments.

## Aviation Asset Management Concentration

## Required Courses

AERO 6120 Aviation History
AERO 6150 Aviation Industries
STAT 6160 Statistics OR
QM 6000 Quantitative Methods Survey
AERO 6300 Air Transportation Systems
AERO 6610 Introduction to Aerospace Research
AERO 6640 Thesis Research
Electives $\mathbf{- 1 2}$ hours from the following:
AERO 6170 Scheduled Air Carrier Operations
AERO 6250 Aviation Policy and Planning
AERO 6350 General Aviation
AERO 6370 Aviation Contracts and Leases
AERO 6450 Airport Funding Policy
INFS 6610 Information Systems Management and Applications OR
INFS 5200 Data Enhanced Internet Applications
ACTG 6000 Survey of Accounting Principles
ECON 6030 Survey of Economic Theory

## Guided Electives

Students will select 6 hours of approved electives suited to their career goals from another department within the University. Selection will be made with appropriate guidance from faculty of both departments.

## Requirements for the Master of EducationAerospace Education Major

Advisement for the degree is provided by graduate faculty members in the Aerospace Department and one graduate faculty member from the College of Education and Behav-
ioral Science. Students in the M.Ed. degree program may elect either an aerospace or an education option. Both options consist of a 13-hour core and are designed to serve applicants interested in education or professional development programs and administration.
Normally, the required test score for admission to the M.Ed. program is 30 on the Miller Analogies Test or a satisfactory score on the Graduate Record Examination.

## Candidate must

1. hold a bachelor's degree from an accredited institution;
2. complete 34 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours (refer to the appropriate option for specific requirements);
3. be admitted by Aerospace Department's Graduate Program Committee;
4. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours; and
5. successfully complete a written comprehensive examination (may be taken no more than twice).

## Option 1 (Aerospace)

## Required - 13 hours

AERO 6100 Aviation Workshop (same as YOED 6100)
SPSE 6430 Introduction to Curriculum Development
AERO 6610 Introduction to Aerospace Research OR
FOED 6610 Analysis and Application of Educational Research
AERO 6120 Aviation History

## Aerospace Electives - 12 hours

Any 5000-level aerospace course not previously taken at the 4000level or any 6000 -level aerospace course with the approval of the student's Aerospace Department advisor.

Education - the following three (3) courses or courses approved by the College of Education and Behavioral Science advisor:
FOED 6020 Educational Foundations
SPSE 6040 Supervision of Instruction
SPSE 6050 Instructional Leadership

## Option 2 (Education)

Students choosing this option must have a designated College of Education and Behavioral Science advisor and should have the appropriate teaching license. The licensure requirement may be waived under special circumstances. A student seeking a licensure waiver must initiate a written request with the advisor, seek approval from the chair and dean of the College of Education and Behavioral Science, and forward the request to the Office of Teacher Licensure, McWherter Learning Resources Center 170.

## Required - 13 hours

| YOED | 6100 | Aviation Workshop |
| :--- | :--- | :--- |
| SPSE | 6430 | Introduction to Curriculum Development |
| FOED | 6610 | Analysis and Application of Educational Research OR |
| AERO | 6610 | Introduction to Aerospace Research |
| AERO | 6120 | Aviation History |

Electives - $\mathbf{1 2}$ hours
FOED 6020 Educational Foundations
SPSE 6040 Supervision of Instruction

SPSE 6050 Instructional Leadership
SPSE 6080 Studies in Leadership
SPSE
SPSE
SPSE
SPSE
6250 Seminar in Curriculum Improvement
6340 School Finance
6500 Studies in Education: Administration

6600 Microcomputers in Educational Administration
Aerospace Electives - 9 hours
Any 5000-level aerospace course not previously taken at the 4000level or any 6000-level aerospace course except for AERO 6100 and 6610.

## Courses in Aerospace [AERO]

5050 Aerospace Internship I. Three credits. Prerequisite: Consent of department chair. Student employed by an acceptable airline, airport director, or aerospace industry for field work. Minimum 300 hours work required. Pass/Fail grading.

5071- Problems in Aerospace. One to three credits. Individual directed 5073 study in the field of aerospace.

5075 Selected Readings in Aerospace. Three credits. Prerequisite: Graduate standing. Guided readings in aviation or space. Topics alternate each semester and range from historical events to possible future developments. Discussion, presentations, and critical analysis of material.

5100 Airline Management. Three credits. Airline operation and implementation of sound management practices.

5110 Airport Management. Three credits. Airport operations. Development of an airport master plan.

5130 Aerospace Physiology. Three credits. Instruction, readings, and structured experiences to ensure familiarity with the various physiological and health-related factors affecting a flyer's safety and performance.

5150 Fixed Base Operations Management. Three credits. The FBO operator and the essential role played in general aviation.

5160 Aviation Law. Three credits. Legal responsibility in the aviation industry.

5170 Airport Planning and Design. Three credits. Methods utilized in airport planning and design; relationship of the airport and the community.

5200 Flight Instruction for Teachers. Three credits. Flight instruction and discussion provide an opportunity to understand the airplane and its operation. Fee required.

5230 Advanced Air Navigation. Three credits. Advanced navigation equipment and operation procedures, GPS, and LORAN.

5240 Aircraft Systems Management. Three credits. Instruction and the requirements pertaining to activities of a flight engineer.

5310 Aerospace Vehicle Systems. Three credits. Design, use, and function of typical hydraulic, mechanical, and electrical systems used on aircraft. For potential pilots, flight engineers, and mechanics.

5400 Space. Three credits. Extensive study of the history of space exploration, the successes and failures of manned and unmanned efforts, and what the future may be for human beings in space.

5490 Aerospace Science for Teachers. Three credits. For teachers who desire an introduction to the total aviation and space effort.

5530 Air Traffic Control. Three credits. The FAA Air Traffic Control system used to regulate air vehicle traffic during enroute and terminal phases of flight, with emphasis on communication, navigation, and control equipment and procedures.

5580 Flight Instruction IV. Three credits. Academics for the ATP and dispatchers written. If flight is desired, student will meet FAR 61 and fee required.

6100 Aviation Workshop. Four credits. (Same as YOED 6100.) A first course in aerospace education; provides an overview of aerospace historically and in the future.

6120 Aviation History. Three credits. Detailed examination of the development and role of aviation and its economic, social, and political impact on the modern world. Particular emphasis on the global aspects of civilian aviation and the consequences of the transportation revolution it engendered. Specific topics analyzed in detail each semester.

6130 Safety Administration and Security. Three credits. An examination of the various programs which airport operators employ in operating and maintaining airport safety and security services. Special emphasis on federal guidelines and their applications at commercial service airports.

6150 Aviation Industries. Three credits. An overview of domestic and international air transportation businesses. Includes an analysis of extant and forecast labor requirements.

6170 Scheduled Air Carrier Operations. Three credits. An examination of contemporary problems and issues confronting airline industry policy makers, government regulators, managers, and the traveling public.

6190 Airport Organizational Structures and Operational Activities. Three credits. Prerequisite: AERO 5110 or 5170 or consent of instructor. A critical analysis of airport organizational structures, functions, and constraints affecting the airport. A detailed view of operational activities and methods to improve airport efficiency.

6220 Environmental Policy. Three credits. Airport planning and land use programs and procedures as they are currently used within the industry.

6250 Aviation Policy and Planning. Three credits. The regulatory agencies of the aviation industry and their functions. Special emphasis on current problems and issues affecting the industry.

6270 Airport Design. Three credits. Introduces the concepts of airport planning, design, and layout with particular emphasis on community characteristics and resource allocation. Students will become familiar with the Federal Aviation Administration's role in the airport design process.

6300 Air Transportation Systems. Three credits. Explores the evolution of the National Airspace and Airway System from its chaotic start to a reasonably sophisticated system. Covers importance of technological developments to improve the system.

6330 International Aviation Systems. Three credits. An in-depth analysis of international aviation with particular attention to U.S. aviation interface. Areas covered include the air traffic control systems, bilateral agreements, nationalized vs. privately owned carriers, ETOPS restrictions, marketing and operational difficulties, etc.

6350 General Aviation. Three credits. Operations, supervision, and the role of administration.

6370 Aviation Contracts and Leases. Three credits. An examination of the various agreements utilized by airports to define the terms and conditions for airlines, FBOs, concessionaires, air cargo operators, and other airport tenants. Analysis of the general provisions and requirements contained within airport leases and those specific to each tenant. A review of airport lease administration and compliance procedures.

6380 Aerostructures. Three credits. Prerequisites: MATH 1730 or 1720 and PHYS 2010. Concepts of mechanics applied to analysis of structural elements used in aerospace vehicles. Loading, deflection safety factors, and modes of possible failure.

6390 Advanced Aerodynamics. Three credits. Prerequisite: AERO 3440 or equivalent. Examines the aerodynamics of aircraft flight from subsonic to hypersonic speeds, with flight through the four sonic regions discussed and solutions to problems presented.

6400 Aerospace Seminar. One credit. Prerequisite: Last semester of resident enrollment. A capstone course involving the analysis, synthesis, and integration of relevant academic experiences.

6450 Airport Funding Policy. Three credits. Airport subsidy funding by the local, state, and federal governments and their essential components as applied to local airports. Procedures necessary to obtain government funding and grants available for building new facilities and repairing existing buildings.

6540 Problems in Aerospace Education. One, two, or three credits. (Same as YOED 6540.) Content varies with needs of individual students who are interested in making a specialized study of current problems in the field of aerospace education.

6610 Introduction to Aerospace Research. Three credits. Emphasis on research as a significant component of graduate study to include methods, procedures, style, and form.

6640 Thesis Research. One to six credits. Prerequisite: AERO 6610. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6700 Advanced Aviation Workshop. Four credits. (Same as YOED 6700.) Builds on prior experiences in aviation/aerospace. Essential for the prospective teacher or aerospace education courses at any level.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

# School of Agribusiness and Agriscience 

Harley W. Foutch, Director<br>Stark Agribusiness and Agriscience Center 100

The School of Agribusiness and Agriscience offers a minor at the graduate level.

## Courses in Agribusiness and Agriscience [ABAS]

5100 Microcomputer Applications in Agriculture. Three credits. Prerequisite: CSCI 1150 or INFS 2200. Includes use of agricultural software, agricultural communications network, computer daily feeding machines, and farm records.

5130 Agricultural Marketing and Price Analysis. Three credits. Prerequisite: ABAS 3130 or approval of instructor. Agricultural prices and their relationship to production and marketing. Agricultural marketing systems, functions, institutions, and structural changes.

5140 Economics of Agribusiness Management. Three credits. Prerequisite: ABAS 3130 or approval of instructor. The application of economic concepts to agribusiness firms.

5150 Agricultural Policy. Three credits. Prerequisite: ABAS 3130 or approval of instructor. Agricultural policy in a democratic society; relationship of farm groups to public policy; types of agricultural programs and appraisal of their results.

5200 Fruit and Vegetable Marketing. Three credits. Prerequisites: PSCI 1030 and BIOL 1030 or approval of instructor. Basic biochemistry of respiration, handling techniques and practices, quality assessment, and marketing of fruit and vegetable crops. Both domestic and international marketing of fruit and vegetable products discussed. Examines economic impact of improper handling on both the local producer and the end user.

5210 Farm Power and Equipment. Three credits. Gasoline engines with actual work experience in overhaul. Work also with transmissions, hydraulics, braking systems, and other farm equipment including use of shop manuals, operation manuals, and parts books.

5220 Methods of Teaching Agricultural Mechanics. Three credits. Emphasis on performing shop skills such as welding, brazing, electrical wiring, etc.

5230 Adult Education in Vocational-Education and Program Development. Three credits. How to teach adults and administer adult programs. Emphasis on planning, organizing, and arranging courses for adults in agriculture.

5260 Behavior of Domestic Animals. Three credits. Behavior aspects of raising and managing domestic animals to include equine,
swine, goats, cattle, sheep, dogs, and cats. Communicative, ingestive, sexual, social, aggressive, and abnormal behaviors emphasized.

5310 Forage Crops. Three credits. Adaptation, distribution, establishment, management, cultivation, and utilization of forage legumes and grasses.

5330 Turf Management. Three credits. Prerequisite: ABAS 1610 or BIOL 1120. Establishment and management of turf grasses for lawns, golf courses, and parks.

5340 Soil Formation. Three credits. Prerequisite: ABAS 3340. Environmental factors affecting soil formation and utilization.

5350 Soil Survey and Land Use. Three credits. Prerequisite: ABAS 3340 or approval of instructor. Soil properties used to determine suitability for land use. Lecture/lab.

5400 Horsemanship-Equitation. Three credits. Prerequisite: ABAS 2400 or approval of instructor. Proper horseback riding, handling, mounting, and dismounting. Various gaits and proper equitation stressed. One lecture and two two-hour laboratory periods.

5410 Animal Nutrition and Feeding. Three credits. Gastrointestinal tract, process of digestion, and nutrient utilization. Application of principles of animal nutrition to formulation of supplements and complete rations for livestock.

5420 Genetics of Domestic Livestock. Three credits. Basic principles of genetics, inbreeding, quantitative traits in livestock, prediction of breeding value and genetic progress, method of selection, mating systems, methods of genetic evaluation, computer software for animal breeding and genetics, and genetic engineering.

5430 Light Horse Production. Three credits. Prerequisite: ABAS 2400 or approval of instructor. Breeding, feeding, management, and disease control practices essential for economical light horse production.

5460 Care and Training of Horses. Three credits. Prerequisites: ABAS 2400, 3400, and 4400 or approval of instructor. Theory, fundamentals, and practices of breaking, training, fitting, showing, and the use of light horses for riding and driving, with special emphasis on the Tennessee Walking Horse and the needs of the local area.

5470 Advanced Beef Production. Three credits. Prerequisite: ABAS 3470 or approval of instructor. In-depth look at various systems of beef production from standpoint of function, economics, and suitability to locale. Extensive field trips to commercial cow-calf, feedlot, performance testing, stocker, and purebred operations.

5510 Domestic Animal Reproductive Physiology. Three credits. Advanced topics in the anatomy, physiology, and endocrinology of reproduction in domestic livestock species. Topics include male and female physiology and an overview of comparative anatomy and physiology between species. Current technologies and methods in controlling reproduction in livestock species also discussed.

5620 Greenhouse Management. Three credits. Prerequisite: ABAS 1610 or BIOL 1120. Analysis of soils, fertilizers, irrigation techniques, container preparation, ventilation, growth regulation, and carbon dioxide enrichment for greenhouse operation. Two hours lecture and one two-hour lab.

5630 Floriculture. Three credits. Prerequisite: ABAS 1610 or BIOL 1120. Propagation and other cultural practices for the production and maintenance of plants and flowers in the home. Two hours lecture and one two-hour lab.

5640 Landscaping. Three credits. Application of the principles of design, the use of proportionate-sized woody landscape plants, and other practices to produce low-maintenance-cost landscapes. One hour lecture and one four-hour lab.

5670 Plant Propagation. Three credits. Prerequisite: ABAS 1610 or BIOL 1120. Anatomical features and physiological principles involved in propagating plants from seed and by division, cutting, budding, and grafting. Use of growth regulators and environmental factors. Two hours lecture and one two-hour lab.

5700 Agriculture in Our Lives. Three credits. The national and international importance of U.S. agriculture. Emphasis on food production and marketing, land conservation, and agriculture related recreation. Accepted as a natural science elective for education majors. NO CREDIT GIVEN TOWARD A MAJOR IN THE SCHOOL OF AGRIBUSINESS AND AGRISCIENCE.

5830 Food Quality Control. Three credits. Prerequisites: PSCI 1030 and BIOL 1030 or approval of instructor. Quality control and sensory evaluation techniques utilized in food processing. Instrumental and physical methods of quality determination of raw and processed food products, hazard analysis and critical control point (HACCP), and quality philosophies employed in the industry. Sensory evaluation techniques and statistical analysis of evaluation results covered.

5910 Problems in Agriculture. One to six credits. Problem or problems selected from one of the major disciplines. May involve conferences with instructor, library work, field study and/or laboratory activity. Students can take from one to three credits with a maximum of three per semester.

5980 Seminar in Horse Science. One credit. Familiarizes horse science majors with important current scientific investigation in horse science.

5990 Seminar. One credit. Students required to research and make an oral report on a current agricultural topic.

6450- Problems in Agriscience Technologies. Three credits each. Pre-
6455 requisite: Teaching experience or approval of instructor. Provides agricultural education teachers with intensive training in advanced technologies. A MAXIMUM OF SIX CREDIT HOURS IN EACH DIVISION.
6451 Animal Science
6452 Plant Science
6453 Agricultural Mechanics
6454 Agribusiness
6455 Forestry and Agricultural Products

## Department of Art

## Jean Nagy, Interim Chair Art Barn 115

The Art Department offers a graduate-level Art minor and a graduate certificate in Art Education.
The graduate certificate in the Art Education Program provides advanced study in public and private schooling, museum education, and other visual art education arenas for professionals who wish to gain a contemporary understanding of the field while earning credits for career advancement.

For admission to the program, applicants must have an undergraduate degree from an accredited university either in art education or a related visual art field (B.A., B.F.A., etc.) and meet all other MTSU requirements for graduate admission. Applicants with degrees in other academic areas must be reviewed and approved by the Art Education Graduate Committee.

The graduate certificate in Art Education is awarded to those candidates who successfully complete 15 hours of approved coursework and maintain a cumulative graduate grade point average of 3.00 or higher in courses leading to the certificate. Up to 6 credit hours of graduate coursework completed elsewhere may be transferred to the certificate program if recommended by the graduate certificate advisor and approved by the dean of Graduate Studies.

The required courses for the graduate certificate in Art Education are
ART 6200 Foundations of Art Education
ART 6210 Theories in Art and Art Education
ART 6220 Problems, Issues, and Trends in Art Education
ART 6230 Research Methods in Art Education (Prerequisites: ART 6200, 6210, 6220)
ART 6240 Independent Project in Art Education (Must be taken simultaneously with 6230)

Candidates for the graduate certificate in Art Education may also choose to work simultaneously toward Tennessee licensure in Art Education.

## Courses in Art [ART]

5000 Workshop. One to three credits. Prerequisite: Permission of instructor. Subject matter as well as credit to be determined by the instructor. May be conducted in the area of art, art education, or any art discipline. (A maximum of nine credits may be applied toward a degree.)

5010 Lapidary. Three credits. Prerequisites: ART 2010 and 3020 or permission of instructor. Introduces cutting, polishing, and setting of semiprecious minerals with a basic course in stone identification.

5020 Enameling. Three credits. Prerequisite: Permission of instructor. Basic techniques of enameling on metal with strong emphasis on development of student's aesthetic and design awareness.

5030 Jewelry. Three credits. Prerequisite: Permission of instructor. Studio practice in constructing, forging, casting, and enameling metals in creating forms for jewelry.

5310 Portfolio II. Three credits. Prerequisite: Permission of instructor. Production of portfolio-based problems with emphasis on advanced design skills related to the specific needs of the workplace. Includes basic collateral problems, ad campaigns, corporate identity, signage, plus a self-promotional package.

5320 Senior Project. Three credits. Prerequisite: Permission of instructor. Following a portfolio review, each member of the class will devise a project that conceptually and visually addresses his or her design/illustration goals.

5330 Internship. Three credits. Prerequisite: Permission of internship coordinator. Advanced students gain practical experience in a professional setting. Approximately 150 work hours required for the semester.

5510 Sculpture IV. Three credits. Prerequisite: ART 3530 or permission of instructor. Development of concepts and techniques with primary emphasis on metal sculpture. Experiences include gas and electric welding, fabricating, grinding, finishing, and subordinate use of other sculpture materials.

5520 Sculpture V. Three credits. Prerequisite: ART 5510 or permission of instructor. Development of concepts and techniques with primary emphasis on casting activities in the foundry covering various metal casting techniques and subordinate use of other sculpture materials.

5530 Sculpture VI. Three credits. Prerequisite: ART 5520 or permission of instructor. Problems in sculpture acceptable to both student and instructor, selected by the student after consultation with instructor.

5640 Advanced Art Problems. One to three credits. Prerequisite: Permission of instructor. Structure and content determined by the Art faculty on the basis of individual need. Student should be prepared to do independent research and experimentation in the area selected. Arrangements must be made prior to registration for acceptance to proper assignment of course credit. (A maximum of nine credits may be applied toward a degree.)

5680 Individual Problems in Drawing. Three credits. Prerequisite: 12 semester hours of previous drawing credit or permission of instructor. Advanced-level course with the content determined in advance through consultation with the instructor.

5710 Painting IV. Three credits. Prerequisite: Permission of instructor. Projects in painting; content of the course planned by student under supervision of instructor. Final paper required.

5720 Painting V. Three credits. Prerequisite: ART 5710 or permission of instructor. Independent studies course in painting which continues concerns of Painting IV.

5730 Painting VI. Three credits. Prerequisite: ART 5720 or permission of instructor. Independent studies course in painting which continues concerns of Painting IV. Final paper required.

5810 Intermediate Clay II. Three credits. Prerequisite: ART 3820 or permission of instructor. Laboratory research and testing of ceramic materials, formulation of glazes and clay bodies, development of a glaze and a clay body.

5820 Advanced Clay. Three credits. Prerequisite: ART 3830 or permission of instructor. Studio experiences in design and construction of sculptural clay forms. Forming methods and decorative techniques explored.

5830 Advanced Study in Clay. Three credits. Prerequisite: ART 4820/ 5820 or permission of instructor. Directed individual study of a problem mutually agreed upon by the student and course instructor. Written paper and exhibit required.

5900 Nineteenth- and Twentieth-Century Art. Three credits. Western visual art movements and trends ca. 1750-ca. 1950, focusing on European painting and sculpture with periodic explorations of non-European and non-Western traditions for perspective.

5920 Contemporary Art. Three credits. Contemporary Western visual art movements and issues ca. 1945 to present, focusing on American painting and sculpture with periodic explorations of other traditions for perspective.

5940 Studies in Art History. Three credits. Content varies. When offered, particular topics addressed are indicated by the course title in the class schedule book. Depending on the nature of the material to be covered, prerequisites may be imposed by the instructor. Can be repeated for up to 9 hours.

5960 Independent Studies in Art History. Three credits. Investigations into art history under the direction of a member of the art history faculty. Topic(s) of investigation must be agreed upon by both student and instructor based on discussions prior to registering for this course. Can be repeated for up to 9 hours.

6200 Foundations of Art Education. Three credits. Prerequisites: Permission of department. Historical development, philosophy, purposes, and value of art education that shaped the structures of public and private schooling in art.

6210 Theories in Art and Art Education. Three credits. Prerequisite: Permission of department. Contemporary theories in art and art education with emphasis on implications for visual art curriculum and instruction.

6220 Problems, Issues, and Trends in Art Education. Three credits. Prerequisite: Permission of department. Problems, trends, and issues, including diversity, within contemporary art education. Overview of instructional technologies. Examines the teacher/ educator as a professional.

6230 Research Methods in Art Education. Three credits. Prerequisites: Permission of department and completion of ART 6200, 6210 , and 6220. Contemporary research methods in art education with emphasis on teacher as researcher. Successful completion of this course is dependent on successful completion of ART 6240.

6240 Independent Project in Art Education. Three credits. Prerequisites: Permission of department and completion of ART 6200, 6210, and 6220. Should be taken simultaneously with ART 6230. Independent research-based course in which the student, with professorial approval, will complete a research project exploring a specific area of interest within art education.

# Department of Biology 

George Murphy, Chair<br>Davis Science Building 127

The Department of Biology offers the Master of Science as well as a minor at the graduate level. Normally, the required test score for admission is a satisfactory Graduate Record Examination score (minimum expected score of 800 verbal and quantitative).

## Requirements for the Master of Science

## Candidate must

1. have an undergraduate minor in biology or its equivalent at time of admission.
2. complete a minimum of 30 semester hours including a thesis of 3 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/ graduate hours.
3. complete 6 semester hours of a foreign language or pass a language examination or complete one year of approved research tools in addition to the 30 hours.
4. pursue a major of at least 16 semester hours which includes
BIOL 6620 Biological Research
BIOL 6630 Biological Literature*
BIOL 6640 Thesis Research
BIOL 6650,6660 Seminar
Remaining courses will include approved courses in biology, chemistry, mathematics, physics, or certain other related disciplines. A minor is optional but if elected must include a minimum of 12 semester hours.
5. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
6. successfully complete a written comprehensive examination (may be taken no more than twice).
*Students who completed BIOL 3230 or equivalent course should consult with department chair.

## Courses in Biology [BIOL]

5010 Embryology. Four credits. Prerequisites: BIOL 1110 and 1120. Early development of the frog, chick, pig, and human. Living material, whole mounts, and serial sections used for the study of cleavage, germ layer formation, histogenesis, and organogenesis. Three lectures and one three-hour laboratory.

5020 Comparative Anatomy of the Vertebrates. Four credits. Prerequisites: BIOL 1110 and 1120. Vertebrate morphology and the development and function of systems and organs. Three lectures and one three-hour laboratory.

5030 Non-Flowering Plants. Four credits. Prerequisites: BIOL 1110 and 1120. Structure, physiology, methods of reproduction, and
classification of the algae, fungi, liverworts, mosses, and ferns. Three lectures and one three-hour laboratory.

5040 General Entomology. Three credits. Prerequisites: BIOL 1110 and 1120. Structure, classification, evolution, importance, and life history of insects. Two lectures and one three-hour laboratory.

5050 Parasitology. Three credits. Prerequisites: BIOL 1110 and 1120. Life histories, host-parasite relationships, and control measures of the more common parasites of humans and domesticated animals. Two lectures and one three-hour laboratory.

5100 History and Philosophy of Biology. Three credits. Prerequisites: BIOL 1110 and 1120. Development of biology; the philosophy, ideas, and contributions of outstanding biologists. Two lectures.

5120 Flowering Plants. Four credits. Prerequisites: BIOL 1110 and 1120. Structure and classification of seed plants and a survey of local flora. Three lectures and one three-hour laboratory.

5130 Histology. Four credits. Prerequisites: BIOL 1110, 1120, 2120, and CHEM 1110 and 1120. Microscopic anatomy of vertebrate cells, tissues, and organs. Three lectures and one three-hour laboratory.

5140 Invertebrate Zoology. Four credits. Prerequisites: BIOL 1110 and 1120. Structure, functions, life histories, and economic importance of the invertebrate phyla. Laboratory work comprises detailed studies of representative specimens. Three lectures and one three-hour laboratory.

5170 Endocrinology. Three credits. Prerequisites: BIOL 1110 and 1120, and CHEM 1110 and 1120. Structure, function, and integrative mechanisms of vertebrate endocrine organs, with additional attention to invertebrate hormones. Three lectures.

5180 Vertebrate Zoology. Four credits. Prerequisites: BIOL 1110 and 1120. Structure, life history, and classification of fish, amphibians, reptiles, birds, and mammals. Local representatives emphasized. Three lectures and one three-hour laboratory.

5220 Ichthyology. Four credits. Prerequisites: BIOL 1110 and 1120. The morphology, physiology, taxonomy, and ecology of fishes. Three lectures and one three-hour laboratory.

5240 General Ecology. Four credits. Prerequisites: BIOL 1110 and 1120, and CHEM 1110 or consent of instructor. Basic concepts of the ecosystem and community, aquatic and terrestrial habitats, and population ecology; complemented by field and laboratory activities. Three lectures and one three-hour laboratory per week.

5250 Limnology. Four credits. Prerequisites: BIOL 1110, 1120, 4240, and CHEM 1110. Biological, chemical, and physical aspects of lakes and streams. Not open to students who have had Aquatic Ecology. Three lectures and one three-hour laboratory.

5260 Nature Study. Three credits. Prerequisites: BIOL 1110 and 1120. Identification of local plants and animals and a consideration of the ecological principles governing them. Two lectures and one two-hour laboratory.

5320 Seminar: Advancements in Biology. Two credits. A broad overview of biological principles and recent research developments. Two lectures.

5331- Biome Analysis. One to four credits. Prerequisite: Permission 5333 of department. An intensive classroom and on-site study of a
specific biome with special emphasis on data collection and analysis. Consult department head for specific credits and costs.
5331 Biome Analysis - Cedar Glade
5332 Biome Analysis
5333 Biome Analysis - Desert
5390 Ethology. Four credits. Prerequisite: BIOL 1110. Innate and learned animal behavior in primitive and advanced animals including behavior associated with space, reproduction, and food getting. Three lectures and one three-hour laboratory.

5460 Human Genetics. Three credits. Prerequisite: BIOL 2120. Application of the fundamental laws of inheritance to humans. Two lectures and one two-hour laboratory.

5500 Plant Physiology. Four credits. Prerequisites: BIOL 1110, 1120, 2120, and CHEM 2030 or 3010. Plant growth; development and metabolism at the cellular and whole plant levels. Three lectures and one three-hour laboratory.

5510 Food/Industrial Microbiology. Four credits. Prerequisite: BIOL 2230. The interaction between microorganisms and food and industrial processes of importance to humans. Two lectures and two two-hour laboratory periods.

5520 Plant Anatomy. Four credits. Prerequisite: BIOL 1120. Plant cells, tissues, and organs. Emphasis on the survival value of the plant's various structural features. Three lectures and one three-hour laboratory.

5540 Topics in Environmental Education. One to four credits. Prerequisite: Junior standing or above. An intensive classroom and field study of natural science and resources in Tennessee. Special emphasis on data collection, analysis, and problem solving. Target groups are graduate students and upper-division undergraduates in the areas of biology and education. Consult the department chair for specific credits and costs. This course will not apply to the biology major or minor.

5550 Biotechnology. Three credits. Prerequisites: BIOL 1110, 1120, 2230, and senior/graduate level. Instruction in both theory and application of current research methodologies in biology and molecular biology. Topics included immunochemistry, polymerase chain reaction, restriction enzyme analysis, and electrophoresis. One two-hour block and one three-hour block which includes both lecture and laboratory.

5560 Neurobiology. Four credits. Prerequisites: BIOL 1110 and 1120, and PSY 4030 or 4240. Introduces comparative neurobiology. Topics include the basic structure and function of the nerve cell and organization of nervous systems of representative species of invertebrate and vertebrate animals. Three hours lecture and one three-hour laboratory.

5570 Principles of Toxicology. Three credits. Prerequisites: BIOL 1110 and 1120, and CHEM 1110, 1120, 3010. Adverse effects of chemical agents on living organisms; current toxicological techniques in laboratory portion of course. Two hours lecture and one three-hour laboratory.

5580 Marine Biology. Four credits. Prerequisites: BIOL 1110 and 1120, and CHEM 1110 and 1120. Biological, chemical, and physical characteristics of major marine environments and their associated flora and fauna. Three lectures and one three-hour laboratory.

6060 Advanced Dendrology. Three credits. Prerequisite: BIOL 1120. Woody plants with special emphasis on classification, identification, and literature of important timber trees of North America. Two lectures and one three-hour laboratory.

6070 Plants and Man. Three credits. Prerequisite: BIOL 1120. Human dependence on plants emphasized. Topics include origin of agriculture, fruits and nuts, grains and legumes, vegetables, spices and herbs, oils and waxes, medicinal plants, psychoactive plants, beverages, fibers and dyes, tannins, wood and ornamental plants. Three lectures.

6080 Advanced Mycology. Four credits. Prerequisites: Graduate standing plus BIOL 1120. Fungi, with emphasis on taxonomy, morphology, culture, and importance to humans. Three lectures and one three-hour laboratory.

6120 Aquatic Ecology. Three credits. Physical, chemical, and biotic conditions of freshwater lakes and streams and of population structure and dynamics in these environments. Not open to students who have had Limnology. Two lectures and one threehour laboratory.

6130 Ornithology. Three credits. Structure, taxonomy, natural history, and identification of birds. Emphasizes field work. Two lectures and one three-hour laboratory.

6180 Mammalogy. Three credits. Morphology, physiology, systematics, and the development of mammals. Two lectures and one three-hour laboratory.

6200 Speciation. Three credits. Prerequisite: BIOL 2120. Mutation, natural selection, adaptation, isolating mechanisms, genetic drift, hybridization, ploidy in the process of species formation, and a history of the development and ideas of evolution. Two lectures.

6210 Protozoology. Three credits. Morphology, physiology, reproduction, ecology, taxonomy, and life cycles of the protozoa. Two lectures and one three-hour laboratory.

6220 Herpetology. Three credits. Prerequisites: BIOL 1110, 1120, and 4240. Morphology, natural history, and identification of amphibians and reptiles. Local representatives emphasized. Two lectures and one three-hour laboratory.

6270 Cell Metabolism. Three credits. Prerequisites: Organic chemistry and one course in physiology or biochemistry or permission of instructor. Metabolic pathways in cells including regulation and genetic aspects of metabolism.

6290 Advanced Scanning Electron Microscopy. Four credits. Prerequisite: Permission of instructor. Application of scanning electron microscopy to study materials with emphasis on theory of scanning electron microscopy and preparation of biological specimens for microscopy. One lecture and six hours laboratory.

6330 Principles of Physiology. Four credits. Prerequisites: BIOL 1110, 1120, 2120, and CHEM 1110 and 1120. Physical and chemical properties of protoplasm, cells, and organisms and their relationships to life processes. Three lectures and one three-hour laboratory.

6350 Biostatistical Analysis. Four credits. Prerequisites: BIOL 1110, 1120, and 2120. Intermediate-level introduction to biostatistical procedures used in research. Three lectures and one threehour laboratory.

6360 Energy Dispersive X-Ray Theory and Analysis. One credit. Prerequisite: BIOL 4290 or 6290. Theory of X-ray analysis and elemental analysis of materials using an energy dispersive X-ray system with scanning electron microscopy. One three-hour laboratory.

6380 Experimental Immunology. Four credits. Prerequisite: BIOL 2230. Mechanisms of immunity including the more recent developments in immunology. Three lectures and one two-hour laboratory.

6390 Advanced Cell and Molecular Biology. Four credits. Prerequisites: BIOL 1110, 1120, 2120, 2230, and CHEM 3010 or 2030. Molecular biology of the cell with emphasis on current experimental techniques. Three lectures and one three-hour laboratory.

6400 Medicinal Plants. Three credits. Prerequisite: BIOL 1120. Plants affecting human health, including poisonous, psychoactive, and remedial plants. Ethnobotanical and modern medicinal uses are treated. Three lectures.

6410 Advanced Transmitting Electron Microscopy. Four credits. Prerequisite: Permission of instructor. Ultrastructure of the cell using basic and specialized techniques. One lecture and two threehour laboratory periods.


6430 Clinical and Pathogenic Microbiology. Four credits. Prerequisite: BIOL 2230. Comprehensive coverage of the most recent discoveries and techniques used for the identification of pathogenic organisms and their relationships to disease processes. Two lectures and two two-hour laboratory periods.

6440 Advanced Virology. Four credits. Prerequisites: BIOL 2230, and CHEM 1110 and 1120. Emphasizes the main virus families and their biochemical composition. Experimental approaches and techniques will be developed in order to identify and manipulate viruses. Two lectures and two two-hour laboratory periods.

6450 Advancements in Molecular Genetics. Four credits. Prerequisites: BIOL 2120 and 2230, and CHEM 1110 and 1120. Recent advancements in microbial genetics and gene manipulation with emphasis on applications of molecular genetics, including gene regulation and recombinant DNA technology. Three lectures and three one-hour laboratory periods.

6460 Conservation Biology. Four credits. Prerequisite: BIOL 4240 or 5240. Measuring biodiversity: species, ecosystem, and genetic diversity. Topics include conservation ethics, extinctions, habitat degradation, exotic species, and management of populations and ecosystems. Meets six hours per week for lecture and laboratory.

6500 Special Problems in Biology. Four credits. Prerequisite: Permission of department. Plan, implement, and interpret a research problem in some area of biology. Available topics limited to areas of graduate faculty interest and expertise.

6590 Environmental Toxicology. Four credits. Prerequisites: BIOL 1110 and 1120, and CHEM 1110, 1120, and 3010. Ecological effects of chemicals in the environment and techniques currently utilized to assess these effects. Current environmental assessment techniques, including biomonitoring, will be covered in the laboratory. Three hours lecture and one three-hour laboratory.

6620 Biological Research. Three credits. Prerequisite: Permission of department. Selection of a research problem, review of pertinent literature, and execution of the research.

6630 Biological Literature. Three credits. Literature sources, forms of literature, bibliographic methods, scientific writing. Two lectures.

6640 Thesis Research. One to six credits. Prerequisites or corequisites: BIOL 6620 and permission of department. Completion of the research problem begun in BIOL 6620; preparation of the thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. Minimum of three credits required for M.S. degree. S/U grading.

6650/ 6660 Seminar. One credit each. Discussion of recent advances and problems in biology. Individual problems for oral and written reports.

6700 Plant-Animal Interactions. Three credits. Prerequisite: Graduate standing. Evolutionary and ecological perspectives on how plants attract and repel symbionts and how those symbionts influence plant fitness. Topics include angiosperm evolution, the coevolution of plants with pollinators, herbivores, mycorrhizae,
and N -fixing bacteria, and how plant secondary metabolites facilitate or mitigate these interactions. One two-hour block and one three-hour block include lecture and laboratory.

6710 Biostatistical Analysis II. Three credits. Prerequisite: BIOL 4350 or 6350. Advanced-level applied, multivariate biological statistics. Three lectures per week.

6720 Advanced Animal Development. Four credits. Prerequisites: BIOL 1110, 1120, and 2120; BIOL 4210 recommended. Processes and underlying molecular mechanisms by which a single fertilized egg develops into an adult organism. Focuses on vertebrate development, including insights gained from other model organisms. Three hours lecture and two hours lab.

6730 Advanced Microbial Physiology and Biochemistry. Four credits. Prerequisites: BIOL 1110, 1120, and 2230; CHEM 1110, 1120 , and 2030 or 3010 or consent of instructor. Survey of the physiology and biochemistry of prokaryotic and eukaryotic microorganisms. Two three-hour blocks of lecture and lab.

6740 Brain Development and Learning Disabilities. One credit. Prerequisite: Permission of department. Biology and psychology underlying dyslexia and other common learning disabilities encountered in the school setting. Addresses practical classroom applications utilizing this background information. Five threehour class meetings.

6750 Advanced Plant Biotechnology. Four credits. Prerequisites: BIOL 1110, 1120, 2120. Processes and reasoning behind the human manipulation of plant species for agricultural and technological purposes. Topics include traditional breeding techniques, tissue culture, plant cell transformation, and general plant molecular biology techniques as well as current debate over genetically modified organisms. Three hours of lecture and three hours of lab.

6760 Bioinformatics. Four credits. Prerequisites: BIOL 1110 and 1120 and CSCI 1170 or consent of instructor. Explores the emerging field of bioinformatics which involves the application of computer science to biological questions. Bioinformatics specifically applies to the computational aspects of data gathering, processing, storage, analysis, and visualization methods for use in revising and testing biological hypotheses. Student should have a strong background in either computer science or biology, be willing to learn about the other field in an accelerated fashion, and be willing to work cooperatively as part of an interdisciplinary team. Three hours of lecture/problem-solving per week.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Field Station Affiliation

MTSU is an affiliate of the Gulf Coast (Miss.) Research Laboratory. Certain courses in marine biology may be taken for graduate credit and transferred to MTSU. See department head for list of courses.

# Business Administration 

Troy Festervand, Associate Dean for Graduate and Executive Education Business and Aerospace Building N222A/B

The University offers a Master of Business Administration degree which requires courses in the Departments of Accounting, Economics and Finance, Computer Information Systems, and Management and Marketing. See departmental listings in this catalog for complete course descriptions.

## Application Process

A complete application package consists of the graduate application, application fee, official transcripts from all collegiate institutions attended, and official GMAT score report.
Deadlines for Completed Applications: Fall - July 1; Spring - December 1; Summer - April 1. Completed application packages received after the deadline will be evaluated based on the date received.

## Requirements for the <br> Master of Business Administration

Candidate must

1. be admitted to the program (see page 27). For admission, a student must meet one of the following:
a. GPA $\times 200+$ GMAT $=950$ or Upper Division GPA $\times 200+$ GMAT $=1,000$
b. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of $\mathbf{B}$ or higher, admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a B average.
2. complete the following foundation courses before enrolling in core courses listed in 3.a. below:*
ACTG 6000 Survey of Accounting Principles, 2 hours
INFS 6010 Survey of Information Systems Issues, 3 hours
Q M 6000 Quantitative Methods Survey, 3 hours
ECON 6030 Survey of Economic Theory, 3 hours
FIN 6000 Survey of Financial Management, 2 hours
MGMT 6000 Management and Operations Concepts, 3 hours
MKT 6000 Marketing Concepts, 2 hours
BLAW 6430 Legal Environment of Management, 2 hours

In addition to the above, it is desirable that all students in the Jennings A. Jones College of Business be proficient in keyboarding and basic computer skills. Students should develop these proficiencies prior to taking Jennings A. Jones College of Business courses in which these skills are typically used. To develop proficiency in keyboarding, students may take BMOM 1000, Keyboarding for Computers. Basic computer skill may be developed by taking INFS 2200, Introduction to Microcomputing.
*Some or all of these courses may be waived by the associate dean for Graduate and Executive Education based upon an analysis of previous courses completed.
3. follow a program which stresses interrelationships of functional business areas and which requires a total of 36 semester hours, at least 30 of which must be at the 6000 level. NOTE: Core courses may not be satisfied by independent study.
a. Core courses: all candidates will take the following 24 semester hours:
ACTG 6910 Accounting and Business Decisions
(Undergraduate Accounting majors should take another 6000-level accounting course.)
ECON 6000 Managerial Economics
FIN 6710 Financial Analysis
MGMT 6600 Study of Organizations
MGMT 6650 Operations Management
MKT 6800 Marketing Management
INFS 6610 Information Systems Management and Applications
B AD 6980 Business Policy (The student will take 6980 in the last semester only.)
b. Global/international elective: 3 semester hours
(Student should see the associate dean for Graduate and Executive Education for a current list of courses that meet the global/international requirement.) NOTE: Independent study
may not be used to satisfy this 3-hour elective.
c. Elective Cognate: 6 semester hours
(choose 6 hours from approved electives in same field)
d. Approved elective: 3 semester hours
(Course taken to satisfy this elective requires prior approval of the associate dean for Graduate and Executive Education.)
NOTE: Independent study course requested to satisfy this elective must be accompanied by a research proposal which has been approved by the supervising faculty member, appropriate department chair, and associate dean for Graduate and Executive Education.
e. A student who has had substantial undergraduate instruction in accounting, economics, finance, information systems, management, or marketing may be required, as determined by the director, to take an alternate 6000 -level course in the same area of instruction in lieu of the required graduate course.
4. A Candidacy Form will be prepared when an applicant is approved for admission to a graduate business program.
5. B AD 6980, Business Policy, includes the required comprehensive written examination for the M.B.A. This course should be taken during the student's last semester and after completing the following courses: ACTG 6910, INFS 6610, ECON 6000, FIN 6710, MGMT 6600 and 6650, and MKT 6800, or the equivalent.

## Department of Business Education, Marketing Education, and Office Management

Stephen D. Lewis, Interim Chair Business and Aerospace Building N429C

A Master of Business Education is offered by the Department of Business Education, Marketing Education, and Office Management. Advisement for the degree is provided by graduate faculty members in this department. A minor in Business Education is offered at the graduate level.

## Requirements for the Master of Business Education (M.B.E.)

Normally, the required test score for admission to the program is 30 on the Miller Analogies Test or a satisfactory Graduate Record Examination score.

Candidate must

1. complete 33 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours.
2. have at least 24 semester hours of undergraduate business subjects.
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
4. successfully complete a written comprehensive examination (may be taken no more than twice).
5. meet licensure requirements to teach business subjects upon completion of the degree or select the nonteaching option.

## Required Courses (6 semester hours)

BMOM 5710
History and Foundations of Business Education and Marketing Education*
BMOM 6620 Research in Business and Marketing Education 27 hours of guided electives

## Research Option

Required Courses
BMOM $5710 \quad$ History and Foundations of Business Education and Marketing Education*
BMOM 6620 Research in Business and Marketing Education BMOM 6780 Problems in BE/ME/VOE 24 hours of guided electives
*Students who complete this course at the undergraduate level may substitute another three-hour graduate level course in business or marketing education.

BMOM, FOED, and SPSE electives will be chosen in consultation with BMOM advisor or department chair.
A non-licensure training and development specialization includes BMOM 5410 and 5450. Electives for this specialization will be chosen in consultation with BMOM advisor or department chair.

## Courses in Business Education, Marketing Education, and <br> Office Management [BMOM]

5200 Problems in BE/ME/OM. One, two, or three credits. Prerequisites: Graduate standing and consent of department chair. Individual research, reading analysis, or projects in contemporary problems and issues in concentrated area of study under direction of a faculty member. May be taken twice.

5210 Innovations and Problems in Accounting. Three credits. Prerequisites: ACTG 2110 and 2120 or approval of instructor. A short history of accounting and data processing including aims, evaluation of textbooks, teaching strategies, testing, and course content.

5240 Materials and Methods in Basic Business. Three credits. Analysis of objectives, materials, research, and appropriate instructional strategies for developing teaching strategies and delivery systems in basic business courses such as introduction to business, economics, international business, business communication systems, American business/legal systems, business management, marketing, and introduction to finance.

5250 Innovations and Problems in Administrative Business Services and Technology. Three credits. Prerequisite: BMOM 2330 or equivalent. Instructional strategies in office technology including objectives, testing, audio-visuals, course content, basic programming, and standards.

5340 Integrated Administrative Technology. Three credits. Prerequisites: BMOM 2330 and 2340 or equivalent. Development of necessary skills for administrators of word processing centers. Word processing feasibility, development, and implementation for business using a total information processing concept. Students develop a thorough knowledge and refine skills using various application software.

5350 Records Management. Three credits. Equipment and systems used for information storage, transmission, and retrieval. Filing, microfilming, tape processing, storage system design, form usage, and other information management functions in the office.

5410 Managerial Media Presentations. Three credits. Prerequisite: BMOM 2330 or equivalent knowledge of computers. Presentations in business and classroom environments. Emphasis on the communication process; audience analysis; presentation design and planning; media integration; innovative delivery techniques; equipment, software, and material selection; and evaluation criteria.

5450 Training Strategies for Business Systems and Technology. Three credits. Prerequisite: BMOM 4410 or equivalent. Corporate learning specialist activities such as design, development, delivery, and evaluation of learning programs for a business environment. Focuses on adult learning theories with emphasis on professional learning activities related to innovative corporate educational programs.

5510 Business Report Writing. Three credits. Prerequisite: BMOM 3510 or equivalent. Nature, general functions, and present need of reports in industry. Recognizing, organizing, and investigat-
ing problems preparatory to writing reports and construction and writing of distinctive business and technical reports.

5520 Instructional Strategies in Marketing Education. Three credits. Develops competence in techniques of teaching with emphasis on problem-solving and demonstration procedures. Emphasizes teaching-learning evaluation.

5600 Organization and Administration of Marketing Education Programs. Three credits. Organizing marketing education programs at the secondary and postsecondary levels; emphasizes youth organizations, techniques of coordination, and administrative procedures.

5640 Problems in Office Management. Three credits. Evaluation of significant research in office management. Observations in local business offices and visits to managers and identifying and solving office problems.

5660 Organizational Communications. Three credits. Prerequisite: BMOM 3510 or equivalent. Research and analysis of case studies of significant research; case studies in business communication; communication policies, principles, and procedures from the executive's viewpoint.

5670 International Business Communication. Three credits. Provides a theoretical and practical framework for understanding and conducting effective international business communication. Emphasis on the analysis and development of international business communication processes.


5680 Diversity in the Workplace. Three credits. Emphasis on developing skills essential for working effectively with a diverse work force in global and domestic settings, incorporating the value of diversity into organizations, and building multicultural work teams.

5710 History and Foundations of BE and ME. Three credits. Developments, aims, principles, and present status of business education; organization and evaluation of the business education curriculum; administration and supervision of business education.

5730 Consumer Education. Three credits. Opportunity to develop understanding of relationship of consumer education to instructional program in business. Emphasis on sources of information and formulation of a conceptual framework essential to the de-cision-making process.

5800 Administrative Office Simulation. Three credits. Prerequisites: BMOM 2330 and 2340 or equivalent. A culmination course which could serve as a transition from the traditional classroom atmosphere to the administrative office atmosphere. Primary emphasis on information and administrative management and controlled decision making through simulation experiences.

5810 Internship Program. Three credits. Prerequisites: BMOM 2330 and 2340 or equivalent. A supervised program requiring 300 hours of related work experience in a marketing or office position. Provides experience of the application of theory into practice.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

6310 History and Philosophy of BE/ME/VOE. Three credits. Historical development, philosophy, and objectives of business and marketing education. Contributions to general education, vocational education, and adult education. Curriculum in relation to future needs, objectives, and social change.

6460 Issues and Trends in Business Education/Vocational-Technical Education. Three credits. (Same as VTE 6460.) Exploration and analysis of research-based studies on current issues and trends in vocational-technical education and business education, marketing education, and office management.

6600 Organization and Coordination of Marketing Education Curriculum. Three credits. Offers preparation for developing, implementing, and coordinating the marketing education curriculum. Emphasis on organizing and administering marketing education programs at the secondary level, on coordinating the work-based learning activities of vocational students, and on integrating and managing youth organizations.

6620 Research in Business and Marketing Education. Three credits. Introduction to research methods, tools, and interpretation of research data.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should
register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6650 Workshop in BE and/or ME. Three credits. Innovations in marketing education and/or business education. Special programs and organizations featured.

6670 Organization, Administration, and Supervision of Business Education. Three credits. Administrative problems of a school system. Emphasis on those of the supervisor of business education, the department head, and the teacher as to reorganization, budgets, curriculum, equipment, personnel, adult education, and public relations.

6700 Coordination of Cooperative Programs. Three credits. Organization of such programs and their characteristics in combining classroom instruction with regularly scheduled supervised experience and on-the-job training.

6720 Measurement and Evaluation in BE and ME. Three credits. Teacher-made, standardized, and industry-developed tests and other standards used in teaching, used to evaluate student achievement, and used by industry for employment and promotion.

6770 Vocational Guidance in BE and ME. Three credits. Developing teacher competence through utilization of occupational information, surveys, and job analysis to determine community opportunities and requirements for employment, placement, and promotion in preparing students for careers in business.

6780 Problems in $\mathrm{BE} / \mathbf{M E} / \mathbf{V O E}$. Three credits. Individualized research projects in special areas of concern to teachers of business education, marketing education, and vocational education and to trainers in business and industry.

6810 Recent Developments in Basic Business. Three credits. Present status and trends affecting content of basic business courses, aims, objectives, learning aids, motivation devices, resource materials, and current research.

6820 Managerial Communication. Three credits. Analysis of communication theory and communication processes with emphasis on development of executive communication skills essential for understanding organizational processes from a holistic perspective. Covers organizational theory, behavior, and interpersonal communication from both a domestic and global perspective.

6830 Recent Developments in Integrated Business Technology. Three credits. Trends in teaching office technology; selecting classroom equipment and applications software, setting standards of achievement for job competencies, developing proficiency in applications of current software, analyzing supportive instructional technologies and materials, and assessing instructional issues in current research and writings.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

# Department of Chemistry 

Earl Pearson, Chair<br>Davis Science Building 239

The Department of Chemistry offers a Master of Science degree with a major in Chemistry and the Doctor of Arts in Chemistry; also offered is a minor in Chemistry at the graduate level.
The required test score for admission to the M.S. program is a satisfactory Graduate Record Examination score. For admission to the D.A. program, a score of 900 on the GRE is expected.

## Requirements for the Master of Science (5000 and 6000 level)

## Chemistry

Candidate must

1. have an undergraduate minor in chemistry or its equivalent at time of admission.
2. complete a minimum of 30 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours.
3. complete the following core curriculum:

CHEM 6100 Intermediate Organic Chemistry, 3 hours CHEM 6230 Intermediate Analytical Chemistry, 4 hours (Quantitative Analysis is a prerequisite for this course; can be taken for undergraduate credit after admission.)
CHEM 6300 Intermediate Physical Chemistry, 3 hours CHEM 6400 Intermediate Inorganic Chemistry, 3 hours (Exceptionally well-prepared students may substitute another approved graduate chemistry course in the same area for the core course by successful performance on a proficiency examination in that core curriculum area.)
4. complete and present an original thesis approved by the student's advisory committee:
CHEM 6640 Thesis Research (3-8 credit hours count toward 30 degree hours)
CHEM 6800 Chemistry Seminar, 1 hour
CHEM 6870 Chemistry Research, 3 hours
5. complete a minimum of 5 credit hours of additional approved chemistry graduate courses, or approved cognate courses in biology, mathematics, computer science, or physics.
6. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours, and annually work out a plan of study for the following twelve months with the academic advisor.
7. successfully complete five of six comprehensive examinations in the following areas of chemistry: analytical/ instrumental, biochemistry, general, inorganic, organic, and physical chemistry. The exam in each area may be taken no more than twice.

## Requirements for the Doctor of Arts (6000 and 7000 level)

1. Full admission requires a master's degree and at least 20 undergraduate and/or graduate hours of coursework in chemistry including a course in quantitative chemical analysis, demonstrated English proficiency, and familiarity with basic computer applications. Students not meeting requirements for full admission may seek conditional admission.
2. The D.A. in chemistry specifies 64 semester hours with at least two-thirds of the program on the 7000 level; however, this can be reduced to 52 semester hours for students entering with a master's in chemistry or education. With the approval of the D.A. Program Committee, students may transfer up to 12 credits for work done in a master's or a doctoral program in chemistry or education. The D.A. coordinator should be consulted for details on transfer credits.
3. The core requirement in chemistry constitutes 19 hours: CHEM 6100, 6230, 6300, 6400, 6500, and 7900. With departmental approval, well-prepared students with recent coursework in any of these areas may fulfill this requirement by passing a proficiency exam in that area; if the exam is passed, the student must substitute an advanced chemistry course in the same area.
4. The advanced chemistry requirement constitutes 15 hours, including at least three of the following courses: CHEM 7110, 7200, 7420, 7510, and 7720. The remaining 6 hours may be chosen, with approval of the advisor and the D.A. Program Committee, from the following: CHEM 7210, 7220, 7700, 7710, 7820, 7910; SPSE 7010; PSY 6280, 6290.
5. The education requirement constitutes 18 hours: CHEM 7800, 7810; FOED 7520, 7560; SPSE 7540, 7550. Consult the D.A. coordinator for details regarding the two chemistry teaching internships (CHEM 7800, 7810).
6. The research requirement constitutes 12 hours of CHEM 7640.
7. A plan of study for the following twelve months and a provisional candidacy form (see no. 10 below) must be worked out annually with the D.A. coordinator.
8. Students should interview prospective research advisors early, and select an advisor by the end of the second semester in residence. A doctoral committee will then be appointed; consult the D.A. coordinator for details.
9. A dissertation proposal (prospectus) will be prepared and submitted to the doctoral committee, then (at least one week later) the proposal will be defended orally before the committee. Consult the D.A. coordinator and page 48 of the catalog for details.
10. A Candidacy Form (see page 39) must be filed with the Graduate Office after completion of the core requirement in chemistry and after approval of the dissertation proposal but prior to the completion of 36 credit hours.
11. Qualifying exams as described on page 49 must be completed during the last semester of prescribed coursework other than dissertation research but after advancement to candidacy is approved.
12. Guidelines and relevant deadlines for the preparation of the dissertation are available from the D.A. coordinator and should be carefully followed. The dissertation must include both chemistry and chemical education components.
13. At least two weeks after the dissertation has been written and submitted to the doctoral committee, the student must present an oral defense of the dissertation to the committee in a seminar open to members of the public. After the examination, the committee will discuss the defense and vote on whether or not the student has successfully defended the dissertation; approval of the committee is required. Upon successful completion of the defense, the candidate submits the corrected dissertation to the Graduate Office. Other details are included on page 49 of this catalog.

## Courses in Chemistry [CHEM]

Graduate standing and permission of department are prerequisites for graduate courses in chemistry. The 5000-level courses also have the same prerequisites as listed for the corresponding 4000-level courses in the undergraduate catalog.

5100 Organic Spectroscopy. Three credits. Prerequisite: CHEM 3220 or equivalent. Theory of and practice in the interpretation of mass, infrared, Raman, ultraviolet-visible, and nuclear magnetic resonance spectra.

5330/ 5340 Physical Chemistry Fundamentals. Four credits each. Modern physical chemistry including current theories of atomic and molecular structures, chemical thermodynamics, electrochemistry, chemical kinetics, and related theoretical topics. Three lectures and one three-hour laboratory period.

5350/ 5360 Physical Chemistry. Four credits each. Quantitative principles of chemistry involving extensive use of calculus. Major topics include thermodynamics, phase changes, chemical equilibria, electrochemistry, reaction kinetics, quantum chemistry, molecular structure, and statistical mechanics. Three lectures and one three-hour laboratory period.

5400 Inorganic Chemistry. Three credits. Basic concepts and theories of inorganic chemistry and how these are used to predict and understand the physical and chemical properties of compounds of the elements other than carbon. Inorganic compounds in the air, water, earth, and in the laboratory, and in biochemistry, geochemistry, and industrial materials and processes.

5500 Biochemistry I. Three credits. Prerequisite: CHEM 3220 or consent of instructor. The chemical properties of biological molecules such as amino acids, proteins, enzymes, and carbohydrates. Chemical basis of enzyme catalysis and reactions of carbohydrate metabolism.

5600 Introduction to Environmental Chemistry. Three credits. Quality of the environment and of chemical changes in the environment through contamination or modification of the air, water, and soils as affected by human, agricultural, industrial, and social activities.

5630 Detection of Chemical Pollutants. Four credits. Theory and practice of analytical chemistry methods used in pollution measurement. Three lectures and one three-hour laboratory period.

5700 Polymers, an Introduction. Three credits. Structure, properties, and applications of polymers.

5730 Advanced Physical Chemistry. Four credits. Modern chemical concepts and computations applied to quantum chemistry, molecular spectroscopy, and statistical thermodynamics. Three lectures and one three-hour calculation laboratory period.

6100 Intermediate Organic Chemistry. Three credits. Prerequisite: CHEM 3020 or 2030 or equivalent. Concepts and modern theories of organic chemistry: stereochemistry of reactions, mechanistic interpretation of organic reactions, and multistep synthesis.

6110 Topics in Organic Chemistry. Three to six credits. Prerequisite: CHEM 6100. A selection of modern topics.

6200 Topics in Analytical Chemistry. Three to six credits. Prerequisite: CHEM 4230 or 6230 . Selected topics of major interest in chemical analysis.

6230 Intermediate Analytical Chemistry. Four credits. Prerequisite: CHEM 2230 or equivalent. Selected instrumental methods of analysis including but not limited to gas and liquid chromatography methods; ultraviolet, visible, and infrared spectroscopic methods; and flame emission and atomic absorption spectrometry. Three lectures and one three-hour laboratory period.

6300 Intermediate Physical Chemistry. Three credits. Key concepts from classical thermodynamics, quantum theory, and chemically relevant spectroscopies. Statistical thermodynamics introduced.

6400 Intermediate Inorganic Chemistry. Three credits. Concepts of inorganic chemistry needed for effective teaching of general chemistry and for safe and effective use of inorganic chemicals and materials in industrial and academic laboratories; atomic theory, principles of inorganic reactivity in acid-base; precipitation, complexation, and oxidation-reduction reactions; crystal and ligand field theory; symmetry; molecular orbital theory; organometallic chemistry.

6410 Transition Metal and Theoretical Inorganic Chemistry. Three credits. Prerequisite: CHEM 5400 or consent of instructor. The chemistry of transition metal complexes, organometallic compounds, and of related compounds, their practical applications, and modern theoretical treatments of this chemistry.

6420 Topics in Inorganic Chemistry. Three to six credits. Prerequisite: CHEM 6400. Selected topics of current interest in inorganic chemistry such as organo-metallic chemistry, inorganic materials science, and kinetics and mechanisms of inorganic reactions.

6480/ 6490 Laboratory in Inorganic Chemistry. One credit each. Prerequisite or corequisite: CHEM 6400 (for 6480), CHEM 6420 or CHEM 5700 (for 6490), or consent of instructor.
6480 Inorganic Synthetic Methods 6490 Physical Methods in Inorganic Chemistry

6500 Intermediate Biochemistry. Three credits. The chemistry and metabolism of biological compounds such as proteins, carbohydrates, lipids, and nucleic acids.

6510 Biochemistry II. Three credits. Prerequisite: CHEM 5500. The structure of lipids, amino acids, nucleotides, and nucleic acids and their metabolism at a molecular level. Emphasis on understanding the chemical basis of biological phenomena.

6520 Topics in Biochemistry. Three to six credits. Prerequisite: CHEM 6500 or 6510 or consent of instructor. Selected topics of particular interest in biochemistry.

6530 Biochemical Techniques. Two credits. Prerequisite/corequisite: CHEM 6500 or 6510 or consent of instructor. Laboratory in biochemical techniques with emphasis on protein purification, enzyme kinetics, carbohydrate and lipid analysis, and manipulation of DNA.

6610 Environmental Soil Chemistry. Three credits. Prerequisite: Working knowledge of physical and organic chemistry. Fundamental chemical principles applied to the fate and behavior of organic and inorganic contaminants in the soil-water environment. Topics include sorption and redox reactions of contaminants.

6640 Thesis Research. One to six credits per semester. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

6720 Topics in Physical Chemistry. Three to six credits. Prerequisite: CHEM 6300. Advanced theories of, latest literature in, and unsolved problems of a particular research area in physical chemistry selected by the professor.

6800 Chemistry Seminar. One credit. Required of graduate students specializing in chemistry. Scientific articles reviewed and reports on individual research projects presented.

6870 Chemistry Research. Three credits. Original laboratory problem that will furnish material for a thesis.

7110 Advanced Topics in Organic Chemistry. Three credits. Prerequisite: CHEM 6100. Applications and advanced concepts in physical organic chemistry, including those used in teaching organic chemistry. Topics include classical and modern approaches in physical organic chemistry including MO theory, conformational analysis, stereochemistry, reaction mechanisms, structure and solvent effects, pericyclic reactions, and theories of acidity/basicity.

7200 Advanced Chemical Separations and Chemical Equilibrium. Three credits. Prerequisite: CHEM 6230 or equivalent including a course in quantitative chemical analysis. Advances in theories and applications of analytical chemistry for students familiar with laboratory techniques and chemical instrumentation. Special attention given to chemical equilibrium as it applies to the practice and teaching of chemical separations.

7210 Problems in Modern Chemical Laboratory Procedures. Three credits. Newly developed laboratory techniques and procedures which the student had not previously had the opportunity to learn.

7220 Independent Study of Instrumental Analysis. Three credits. Developing skill in using selected sophisticated instruments.

7420 Advanced Topics in Inorganic Chemistry. Three credits. Prerequisite: CHEM 6400. Applications and advanced concepts of inorganic chemistry; methods of teaching these concepts. Inorganic materials such as metals, superconductors, zeolites, and fullerenes; organometallic compounds, halides, hydrides, and oxides of elements; inorganic reaction mechanisms; bioinorganic chemistry; electronic states and term symbols. Modern methods of teaching inorganic content in general chemistry courses.

7510 Advanced Biochemistry. Three credits. Prerequisite: CHEM 6500 or consent of instructor. Advanced subjects in biochemistry including current techniques in structure/activity relationships of biomolecules, regulation and control of metabolic pathways, bioenergetics, enzymology, control of transcription and translation, regulation of gene expression, and biochemistry of inherited disease.

7640 Dissertation Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled, student should register for at least one credit hour of doctoral research each semester until completion. S/U grading.

7700 Topics in Theoretical Chemistry. Three to six credits. Bonding, stereochemistry, empirical and semi-empirical parameters, state functions, spectroscopic interpretation, and reaction mechanisms.

7710 Topics in Applied Chemistry. Three to six credits. Some important and current practical applications.

7720 Advanced Topics in Physical Chemistry. Three credits. Prerequisite: CHEM 6300. Theoretical basis and application of the principal methods used for experimental molecular structure determination. Computational methods of structure prediction and interpretation of data. Searching and retrieving structural information from structural databases.

7800/ 7810 Chemistry Internship. Three credits each. Prerequisite: Permission of department. Admission based on recommendations and performance in teaching.

7820 Seminar in Chemical Education. One credit. Areas and ideas associated with chemical education. Readings from current literature or seminal texts on given topics which may include the role of laboratory in chemical education, current research in science education, trends in chemical education, research techniques in chemical education, and the historical development of chemistry. Offered online. May be taken up to three times for credit.

7900 Teaching and Learning in Chemistry. Three credits. Areas and ideas associated with chemical education. Readings from the current literature or seminal texts on misconceptions in chemistry, theories of learning, and theories of teaching.

7910 Instructional Technology in the Science Classroom. Three credits. Explores concepts and applications associated with the use of computer- and other technology-based instructional materials in the science classroom. Readings from current literature or seminal texts on theoretical issues; practical applications associated with the use of technology in teaching scientific concepts.

## Courses in Physical Science [PSCI]

Graduate standing and consent of instructor are prerequisites for graduate courses in physical science.

5030 Experimental Physical Science. Four credits. Basic concepts, laws, and principles of astronomy, chemistry, geology, and physics with particular emphasis on the utilization of equipment available or easily improvised in actual school situations to illustrate these concepts, laws, and principles.

5080 Problems in Physical Science. Four credits. A problem from chemistry, physics, or other physical science appropriate to the student's background and interest.

6020 Investigations in Physical Science. One, two, or three credits. Prerequisite: Graduate standing or consent of instructor. Topics from astronomy to chemistry and physics, with special emphasis on the development of hands-on activities, determination of content cognitive demand, development of appropriate assessment instruments/implementation plans, and implementation of these across the pre-college curriculum. For practicing precollege science teachers and school administrators. Consult the listed instructor for costs and specific credits. Does not apply toward chemistry graduate degrees.


# Department of Computer Information Systems 

Stan Gambill, Chair<br>Business and Aerospace Building N333C

The Department of Computer Information Systems (CIS) offers the Master of Science in Accounting and Information Systems with Information Systems as the primary field. The department also offers courses for the Master of Business Administration degree. A minor in Information Systems is offered for students seeking a master's degree other than the M.B.A. The CIS graduate coordinator serves as advisor for students choosing Information Systems as their primary field.
Students are also encouraged to contact the CIS Department to discuss its program.

The prerequisites for a student seeking an M.S. in Information Systems are the same as those required for the M.B.A. degree plus instruction in international business. A recent graduate of an AACSB-accredited program would normally possess an adequate background in the business prerequisites.
Students electing Information Systems as a primary field without an undergraduate degree in information systems or demonstrable professional experience in the discipline are required to complete the additional prerequisites of INFS 3700 and 4790 (or 5790). INFS 5790 may be taken for credit toward the graduate degree. Completion of prerequisite courses does not reduce the hours necessary for completion of degree. Students without formal training or experience in computer programming are often encouraged to take some additional INFS courses including COBOL Applications, INFS 2720, and Advanced Programming, INFS 4760 (5760). A portion of these requirements may be satisfied in conjunction with the student's graduate studies.
To be admitted to the M.S. program (see page 27), a student must meet one of the following:
a. GPA $\times 200+$ GMAT $=950$
or Upper Division GPA $\times 200+$ GMAT $=1,000$
b. International students must comply with the following provision: For undergraduate degrees from foreign institutions where a grade point average cannot be clearly established but where that work is thought to be equivalent to domestic grades of $\mathbf{B}$ or higher, admission eligibility may be determined by the GMAT score. A score of at least 450 is required for unconditional admission under such circumstances. Preparatory work taken in institutions with grading systems paralleling that of most United States institutions must conform to a $\mathbf{B}$ average.

## Requirements for the Master of Science <br> Information Systems as Primary Field

## Required

| INFS | 6710 | Systems Analysis |
| :--- | :--- | :--- |
| INFS | 6790 | Seminar in Database Management |
| Q M | 6770 | Computer-Based Decision Modeling |
| ACTG | 6910 | Accounting and Business Decisions <br> (or approved substitute) |
| INFS | 6980 Information Systems Practicum |  |

## Electives

Six hours in INFS at the 6000 level
Three hours of INFS or ACTG at the 5000 or 6000 level
Three hours of approved electives at the 5000 or 6000 level
Three hours in international/global at the 6000 level (may be satisfied by INFS 6750, Seminar in Global Information Systems)

## Additional Requirements

INFS 6980 must be passed with a grade of B- or higher with a maximum enrollment of two times.

The degree is to be completed within six years from the time of admission to the degree program.
No foreign language or thesis is required in the program.
No more than two (2) 5000-level classes may be taken as part of the degree program.
Information systems majors may meet the international/global requirement with any approved Jennings A. Jones College of Business course; however, the selection of INFS 6750, Seminar in Clobal Strategic Information Systems, is encouraged.

Students planning to graduate in the minimum amount of time, including Summer attendance, should plan their programs carefully in order to meet course sequencing and scheduling constraints. The Computer Information Systems Department can provide scheduling assistance.
A limited number of graduate assistantships are available on a competitive basis to qualified students.

Students with undergraduate degrees in Information Systems may not take INFS 6610 to satisfy either a required or elective course in the program.

## Courses in Information Systems [INFS]

5200 Data Enhanced Internet Applications. Three credits. Prerequisites: 6 hours of information systems. Focus on designing, deploying, maintaining, and querying an Internet database using appropriate hardware and software. In-depth study of e-commerce applications in a microcomputer environment.

5760 Advanced Programming. Three credits. Prerequisite: INFS 2720. Functional programming experience in structured programming techniques; top-down design; advanced file handling and maintenance techniques to include sequential, indexed sequential, direct, and relative file organization; interactive, menu-driven applications; and uploading/downloading programs to a central site. Requires extensive laboratory work.

5790 Database Design and Development. Three credits. Prerequisite: 6 hours of information systems. Fundamental concepts: conventional data systems, integrated management information systems, database structure systems, data integration, complex file structure, online access systems. Emphasis on total integrated information systems database and database management languages.

5830 Database Programming. Three credits. Prerequisite: 6 hours of information systems. Operational database design and implementation. Includes the development of interfaces that enable end users to query the database contents and transform data into information. Requires each student to participate fully in a group project.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

5900 Business Data Communications. Three credits. Prerequisite: 6 hours of information systems. Current topics in the field of data communications.

6010 Survey of Information Systems Issues. Three credits. Topics include Systems Development Life Cycle (SDLC), Data Resource Management, and Information Resource Management. Incorporates various microcomputer applications software packages. May not be used for elective credit in graduate business degree programs.

6610 Information Systems Management and Applications. Three credits. Prerequisites: Graduate standing and INFS 3100 or 6010. Focuses on utilization of computing resources in managerial context. Students will develop an understanding of issues and implications of information resources and end-user computing as well as develop skills in application of these concepts in a problem-solving oriented microcomputer system environment. NOT open to students with an undergraduate degree in Information Systems.

6620 Advanced Computer Applications for Business. Three credits. Prerequisite: INFS 6610 or permission of instructor. Advanced application development in an end-user computing environment. Opportunity to develop skills in building applications to support management activities in the information age. Includes database systems, electronic spreadsheets, and other appropriate application environments.

6710 Systems Analysis. Three credits. Prerequisite: INFS 6610 or an undergraduate major or minor in Information Systems or permission of instructor. Practical explanation of the total systems concept and a knowledge of systems development. Addresses the entire development cycle including analysis, design, and implementation.

6720 Decision Support Systems. Three credits. Prerequisite: INFS 3100 or 6010. Examines the broad area of management support systems. Concepts and issues surrounding decision support systems, expert systems, and executive information systems. Software packages used to solve application problems chosen from appropriate business areas.

6740 Strategic Information Systems. Three credits. Prerequisite: 6 graduate hours of information systems. Focuses on the use of information system (IS) and information technology (IT) in the strategic management process in business organizations. Emphasis on the strategic view of IS and IT and their impact on organizational strategy. Use of IS and IT to support prominent generic strategy models and how IS and IT aid applying the principles of those generic strategic models.

6750 Global Strategic Information Systems. Three credits. Prerequisite: INFS 3100 or 6010 or permission of instructor. Examines the managerial, operational, and strategic implications of information and communication technology in the global context. Particular emphasis on the strategic dimension.

6760 Programming Applications. Three credits. Prerequisite: INFS 2200 or permission of instructor. Beginning to advanced topics in computer programming. Structured programming approach emphasized as students write application programs for an increasingly difficult series of exercises.

6790 Seminar in Database Management. Three credits. Prerequisite: INFS 6610 or an undergraduate major or minor in Information Systems or approval of instructor. Advanced topics in computer-related information systems as found in current literature and practical application. Advanced information structures and data management concepts applied in the design of computer-based information systems. Additional topics include data structures as applied to distributed processing systems, computer system component resource allocation, and data communication systems design. Significant computer application projects required.

6880 Electronic Commerce. Three credits. Prerequisite: INFS 3100 or 6010 or permission of instructor. The business and technical implications of electronic commerce from the perspective of the manager of information technology. Introduces the technical, business, managerial, and social issues associated with electronic commerce systems. Addresses the role of information technology in the development of electronic commerce applications and considers the ethical and legal implications of electronic commerce.

6900 Business Data Communication Management. Three credits. Prerequisite: INFS 3100 or 6010 or permission of instructor. Management and use of data communications technologies to support the operations of businesses. Practical experiences in the use of data communications technologies, such as local area networks, the Internet, distributed computing, and distributed databases.

6980 Information Systems Practicum. Three credits. Prerequisites: 6 hours of information systems. Emphasizes communication skills, creative thinking, problem solving, and professional responsibility from a leadership perspective. Includes the discussion of information systems assessment in organizations. Capstone course for Information Systems majors and must be taken the last semester prior to graduation.

6990, 6991 Independent Research in Information Systems. Three credits. Prerequisites: Graduate standing and consent of department chair. Provides individual research, readings analysis, or projects in contemporary problems and issues in a concentrated area of study under the direction of an appropriate faculty member. Maximum credit applicable toward degree may not exceed six credits.

## Courses in Quantitative Methods [Q M]

6000 Quantitative Methods Survey. Three credits. Quantitative methodologies to assist in the decision-making process. Emphasis on applied statistics and decision sciences topics that are practical, useful, and of wide application for business analysis. May not be used for elective credit in graduate business degree program.

6770 Computer-Based Decision Modeling. Three credits. Prerequisite: Q M 3620 or 6000 . Advanced techniques in quantitative methods. Modeling and optimization techniques. Computer applications emphasized.

6960 Statistical Methodology and Analysis. Three credits. Prerequisite: Q M 3620 or 6000 . Descriptive and inferential statistical concepts with the use of expert systems to assist in the selection of appropriate design and methodology. Utilization of common packages for problem solution and analysis.


# Department of Computer Science 

Richard Detmer, Chair<br>Kirksey Old Main 306

The Department of Computer Science offers the Master of Science with a major in Computer Science and a minor at the graduate level.

Admission to the master's program requires a satisfactory Graduate Record Examination score.

## Requirements for the Master of Science

## Candidate must

1. meet the following requirements:
a. have completed CSCI 1170, 2170, 3080, 3110, 3130, 3160, and 3250 or equivalent of each course;
b. complete CSCI 5700 if he or she did not complete CSCI 4700 or an equivalent course as an undergraduate; and
c. complete CSCI 5560 if he or she did not complete CSCI 4560 or an equivalent course as an undergraduate;
d. complete CSCI 6620.
2. have completed MATH 1910 and 2050 or equivalent of each course.
3. complete at least 24 semester hours of graduate computer science courses at MTSU.
4. complete of the of the following two options:
a. Thesis option: A thesis and at least 30 hours of graduate coursework. Up to 3 hours in CSCI 6640 may be included in the 30 hours. Students must present an oral defense of the thesis. A minimum of 21 hours must be at the 6000 level.
b. Nonthesis option: At least 36 hours of graduate coursework. CSCI 6620 must be taken in the last semester prior to graduation (Spring Semester for Summer graduation) with a grade of B (3.00) or higher earned. Credit for CSCI 6640 may not be included in the 36 hours. A minimum of 24 hours must be at the 6000 level.
NOTE: A student already holding a master's degree from MTSU may complete a second master's degree in Computer Science by satisfying either of the above options with a minimum of 27 semester hours. A minimum of 18 hours must be at the 6000 level.
5. take all courses in the Computer Science Department with the following possible exceptions:
a. with the prior approval of the Computer Science graduate faculty, a maximum of 6 hours of cognate courses may come from departments other than Computer Science.
b. with the approval of the candidate's graduate advisor, a single minor up to 12 semester hours may be included. Such a minor must also be approved by the department offering the minor.
NOTE: With the approval of the Computer Science graduate faculty, a maximum of 12 semester hours of residence credit (maximum of 6 in Computer Science) may be transferred from another institution and applied to the master's degree.

## Courses in Computer Science [CSCI]

5130 Microprocessor Operation and Control. Three credits. Prerequisite: CSCI 3160. Digital systems based around microcomputers, microcomputer architecture, logic replacement, memory design, timing considerations, input/output design, interfacing, robotics, and total system design.

5160 Compiler Design and Software Development. Three credits. Prerequisites: CSCI 3110 and 3160. The various phases of a compiler along with grammars, finite automata, regular expressions, LR parsing, error recovery, backward and forward flow analysis, and code optimization. A term project consisting of the design and construction of a functional compiler required.

5250 Computer Graphics. Three credits. Prerequisites: CSCI 3110 and 3180 or consent of instructor. Topics include vector drawing displays, raster scan displays, input devices and techniques, graphics software, transformations, projections, interpolation, and approximation.

5300 Data Communication and Networks. Three credits. Prerequisite: CSCI 3250. Computer network architectures, protocol hierarchies, and the open systems interconnection model. Modeling, analysis, design, and management of hardware and software on a computer network.

5330 Parallel Processing Concepts. Three credits. Prerequisites: CSCI 3130, 3250, and a working knowledge of either C or $\mathrm{C}++$. Parallel processing and programming in a parallel environment. Topics include classification of parallel architectures, actual parallel architectures, design and implementation of parallel programs, and parallel software engineering.

5350 Introduction to Artificial Intelligence. Three credits. Prerequisites: CSCI 2170 and 3080 or equivalent. Principles and applications of artificial intelligence. Principles include search strategies, knowledge representation, reasoning, and machine learning. Applications include expert systems and natural language understanding.

5360 Intelligent Robot Systems. Three credits. Prerequisites: CSCl 2170 and 3080. Principles and applications of intelligent mobile robotics. Various architectures used in the basic AI robotics development paradigms and basic techniques used for robot navigation. Strong emphasis on hands-on mobile robot design, construction, programming, and experimentation using a variety of robot building platforms.

5560 Database Management Systems. Three credits. Prerequisite: CSCI 3110. The relational and object models of database design along with relational algebras, data independence, functional dependencies, inference rules, normal forms, schema design, modeling languages, query languages, and current literature.

5600 Independent Study in Computer Science. One to six credits. Prerequisite: Consent of instructor. Students wishing to enroll must submit a written course/topic proposal to the department prior to the semester in which CSCI 5600 is taken. Proposal must be approved prior to taking the course. At the conclusion of the course, each enrollee will submit a written summary of the project.

5700 Software Engineering. Three credits. Prerequisite: CSCI 3110. Consists of a theoretical component and a practical component. Topics include the history of software engineering, software development paradigms and life cycles, and computer-aided soft-
ware engineering (CASE). A team project will be developed in parallel with the theory.

5800 Software Testing. Three credits. Prerequisites: CSCI 2170 and 3080. Integrates theory and applications of software testing techniques. Provides actual hands-on testing experience. Considers multiple testing paradigms.

5850 Neural Nets. Three credits. Prerequisite: CSCI 3080. Various neural net architectures, theory, and applications, including models such as Perceptron, back propagation, Kohonen, ART, and associative memory. Learning and conditioning methods also studied.

5900 Selected Topics in Computer Science. Three credits. Prerequisite: CSCI 2170. Advanced topics in computer science to be selected and announced at time of class scheduling. May be repeated for up to six credits total.

6100 Analysis of Algorithms. Three credits. Prerequisites: CSCI 3110 and 3080 or consent of instructor. Topics include the analysis and design of algorithms; efficiency of algorithms; design approaches including divide and conquer, dynamic programming, the greedy approach, and backtracking; P and NP; and algorithms in many areas of computing.

6130 Selected Topics in Parallel Processing. Three credits. Prerequisite: CSCI 4330/5330. An in-depth investigation of one or more topics in parallel processing. Topic(s) to be selected by the professor. Possible topics include parallel algorithms, parallel programming languages, parallel programming tools, parallel software engineering, parallel architectures, parallel applications, and parallel VLSI. Repeatable up to 6 hours.

6180 Software Design and Development. Three credits. Prerequisite: CSCI 3110. State-of-the-art techniques in software design and development; provides a means for students to apply the techniques.

6190 Theory of Compilers. Three credits. Prerequisite: CSCI 4160/ 5160. Theory of parsing methods as well as symbol table construction, code optimization, run time storage management, and implementation of recursion.

6250 Advanced Operating Systems. Three credits. Prerequisite: CSCI 3250. Topics include concurrent processes, name management, resource allocation, protection, advanced computer architecture, and operating systems implementation.

6260 Advanced Computer Graphics. Three credits. Prerequisite: CSCI 4250/5250. Topics include three-dimensional curves and surfaces, projections, hidden line and surface elimination, raster graphics systems, and shading techniques.

6300 Networks. Three credits. Prerequisite: CSCI 4300/5300. Computer communications, network architectures, protocol hierarchies, and the open systems interconnection model. Modeling, analysis, and specification of hardware and software on a computer network. Wide area networks and local area networks including rings, buses, and contention networks.

6350 Selected Topics in Artificial Intelligence. Three credits. Prerequisites: CSCI 3110 and 4350/5350. In-depth study of the principal areas of the field: artificial intelligence programming, problem-solving methods, knowledge representation methods, deduction and reasoning, and applications such as natural language processing and expert systems. Repeatable up to 6 hours.

6450 Operating System Design. Three credits. Prerequisite: CSCI 6250. Definition, design, and implementation of a significant operating system examining such areas as file systems, process management, memory management, input/output device management, and user interface.

6550 Introduction to Symbolic and Algebraic Manipulation. Three credits. Prerequisites: CSCI 3110 and 4350/5350. Techniques for algebraic manipulation on the computer. Includes symbolic differentiation and integration, extended precision arithmetic, polynomial manipulation; introduces one or more symbolic manipulation systems. Automatic theorem provers considered.

6560 Selected Topics in Database. Three credits. Prerequisite: CSCI 5560. An in-depth investigation of one or more topics in database. Topic(s) to be selected by the professor. Possible topics include object-oriented database systems, distributed database systems, client-server database systems, deductive databases, multimedia databases, and database theory (concurrency, query optimization, recovery, security). Repeatable up to 6 hours.

6600 Selected Topics in Computer Science. Three credits. May be repeated for up to six credits total. Prerequisites: A solid foundation in undergraduate computer science and any prerequisites determined by the instructor. An in-depth investigation of one or more topics in computer science. Topic(s) to be selected by the professor. Possible topics include search techniques, for example genetic algorithms, soft computing, object-oriented software engineering, expert systems, program verification, software quality, knowledge discovery in databases, and design of embedded software systems.

6620 Research Methods in Computer Science. Three credits. Prerequisite: Twelve hours of graduate work in computer science. Emphasizes communication skills, creative thinking, problem solving, and integration of knowledge from prior computer science courses. Includes a study of computer science research tools. Students will select a research problem with approval of the instructor, review pertinent literature, and produce a report using the manual of thesis writing currently approved by the College of Graduate Studies.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.


# Department of Criminal Justice Administration 

## Deborah Newman, Chair <br> Vaughn House 6

The Department of Criminal Justice Administration offers a Master of Criminal Justice (M.C.J.) degree in cooperation with Tennessee State University. A minor in Criminal Justice at the graduate level is also offered at MTSU. Normally, the required test score for admission to the Master of Criminal Justice program is 25 on the Miller Analogies Test or a satisfactory score on the Graduate Record Examination. To be considered for Fall admission, an applicant's materials must be received by June 15; for Spring admission, November 1; and for Summer admission, April 15.
A graduate student may not enroll in more than 12 total hours in any given semester. This limitation applies to Criminal Justice graduate students who may be simultaneously enrolled at both TSU and MTSU. Any student exceeding the hours-per-semester limit will be dropped from a course or courses to the twelve-hour level. A student may, on rare occasions, be given permission for an overload, but the proper overload form must be executed before courses begin and under no circumstances will the overload exceed three hours or a total of 15 hours.

## General Requirements for the Master of Criminal Justice

## Candidate must

1. have completed a minimum of 18 hours of work at the undergraduate level in criminal justice or an approved equivalent.
2. complete a total of 36 hours ( 18 hours at MTSU and 18 hours at TSU) with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours including the following core courses:
Middle Tennessee State University - Fall Semester Only
CJA 6000 Criminal Justice Administration, 3 hours
CJA 6010 Seminar in Law Enforcement, 3 hours
Tennessee State University - Spring Semester Only
CJA 6020 Judicial Seminar, 3 hours
CJA 6030 Contemporary Corrections, 3 hours
3. file a Candidacy Form after having completed 10 semester hours credit and before having completed 16 semester hours credit. Candidate must have maintained an average grade of 3.00 or above on all work attempted. No fewer than 10 and no more than 16 semester hours may be counted toward the degree before the individual is advanced to candidacy. Indicate research/thesis institution at this time.
4. complete the following 6 hours at one institution (MTSU or TSU):
CJA 6900 Research in the Criminal Justice Process, 3 hours
CJA 6640 Thesis Research, 3 hours
5. complete the remaining 18 hours of approved electives as follows:
12 hours at the non-thesis/research institution 6 hours at the thesis/research institution
6. successfully complete an oral comprehensive examination in conjunction with the thesis defense.

## Courses in Criminal <br> Justice Administration [CJA]

5220 Community Relations and Minority Problems. Three credits. Analysis of public hostility toward police and current community relations projects; training and education of law enforcement officers; responsibilities of police administrators; causes of tension and conflict, positive and negative factors in the control of minority group hostilities; minority recruitment in law enforcement.

5260 Special Issues in Law Enforcement. Three credits. Variety of subtopics related to law enforcement. Problems in private and public morality with regard to drug use, alcoholism, and sex offenses; analysis of current police training programs; relationship between legislation and political process which affects law enforcement.

5330 Criminal Investigation. Three credits. (For CJA majors or with permission of instructor.) General investigative responsibilities and techniques, including administration preparation, investigative jurisdiction and responsibility, and the importance of substantive report writing. Includes special techniques required for specific investigative categories.

5500 The Juvenile Justice System. Three credits. Juvenile delinquency and youth crime with emphasis on the history of the juvenile justice system, the court and police role within the system, rehabilitation and correction of the delinquent, and juvenile probation services. Alternatives to traditional procedures: com-munity-based programs versus correctional institutions, nonjudicial adjustment, etc., examined.

5530 Criminal Evidence and Procedures. Three credits. Types of individuals and problems of admissibility in court proceedings, proper treatment and disposition of evidence, legal procedure to be followed, and actual trial procedure.

5750 Seminar in Corrections. Three credits. Each student selects a problem area of interest for an intensive research effort. The group will be presented with a contemporary corrections issue or problem and will be required to create practical and workable strategies for coping with the issue. Where feasible, arrangements will be made to implement the program in an actual correctional setting.

5800 Crime in America: An Assessment. Three credits. An in-depth survey of the impact of crime on American society: amount and trends of crime, economic impact of crime, professional and white collar crime, characteristics of offenders and victims of crime.

5900 Readings in Criminal Justice. Three credits. Advanced students capable of independent study will be allowed to do in-depth readings in a particular area of criminal justice relevant to individual interests. Annotated bibliography and report required. Arrangements for this course should be made with the instructor prior to registration.

6000 Criminal Justice Administration. Three credits. Criminal justice, juvenile justice, correctional and mental health processes, and other issues including those arising out of other processes of social control and community-based treatment of offenders. Development of a critical analysis of current literature, compilation of a bibliography, and completion of an intensive research paper required.

6010 Seminar in Law Enforcement. Three credits. The function of police within the community and its relationship to the criminal justice system, the effects of police actions on the community and other segments of the system, social expectations and limitations, assessment and special problems. Analysis of relevant studies, formation of annotated bibliography, and organization of research into a formal composition.

6020 Judicial Seminar. Three credits. Examination of the judicial system, including flow of the criminal case, personnel, court community relations, computers and the courts, and special problem areas. A research project consisting of a literature review, bibliography, and a thorough analysis required.

6030 Contemporary Corrections. Three credits. Corrections programs in contemporary custodial and juvenile institutions and com-munity-based corrections programs; problems and prospects associated with them. Each student required to make class presentations on assigned topics, participate in class discussions and analysis of reports, develop a bibliography, and submit a research paper in a specific area of corrections.

6040 The Concept of Justice. Three credits. Historical development and philosophy of law. The notion of justice in a criminal context, with emphasis on equity and ethics in law and justice. Examines the sociology of law and societal constraints on proscribed behavior.

6230 Police Management Systems. Three credits. The need for awareness of police management problems, reaction of criminal justice system within P.M.S., administrative behavior toward the organizational environment, and the nature of change within P.M.S. Preparation of a research paper which consists of complete analysis of a topic within P.M.S., a review of recent literature, and an annotated bibliography required.

6250 Criminal Justice Internship. Three credits. Prerequisite: Permission of instructor. Student placed for an intensive field experience in a functional criminal justice agency. The selection of the placement agency determined by student's background, academic status, and interest.

6300 Innovations in Law Enforcement. Three credits. The changing role of the police function and its relationship to the criminal justice system, including evaluation of the operational line function of the 80 s, technological changes in society and their effects on law enforcement, and the etiology of innovation. Evaluation of recent literature, compilation of a list of selected readings, and unification of research into a methodological exposition.

6410 Advanced Constitutional Law. Three credits. Examination of constitutional rights of the accused including pretrial, trial, and prisoner rights. Reading and critique of current literature and Supreme Court decisions, learning to function in a law library, and composing a research paper with a bibliography on a chosen constitutional topic.

6430 Criminal Law: The Defense Side. Three credits. Procedure of the criminal courts from the defense viewpoint. ABA standards for defense attorneys, the handling of a case by the defense from arrest to appeal, and ethical problems posed for defense
attorneys. Attention given to defense by appointment and plea bargaining.

6500 Interviewing and Counseling Juveniles. Three credits. Causal theories of delinquency, application of theory to treatment, caseworker attitudes, and counseling styles. Discussion of individualized models for classification and treatment as well as group and process models.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6700 Community-Based Corrections. Three credits. Intensive survey of probation and parole at both the adult and juvenile levels. Halfway houses, work-release programs, and other community correctional settings. Impact of the "justice model" upon community corrections featured.

6830 Violence and Victimology. Three credits. Impact of violence on victims at both the adult and juvenile levels examined. Other major topics include the right to treatment, victims as witnesses, victims in the correctional system, and societal reaction to violence.

6900 Research in the Criminal Justice Process. Three credits. Introduces research methods, including the experiment and experimental methods and models, survey research, participant observation, case studies, unobtrusive measures, the use of official and unofficial statistics, validity, reliability, and data analysis. Special emphasis on ethics in criminal justice research and on proposal writing and evaluation research.

6920 Seminar in Criminal Justice Planning and Management. Three credits. Intensive introduction to principles of planning and management in the system. Students required to actively participate in planning exercises and to utilize data from actual situations for the development of appropriate management strategies.

6930 Comparative Systems of Criminal Justice. Three credits. Systems in the U.S. and Great Britain, New York, and London. Crime and justice in northern and southern Europe, Russia, and Canada. Discussion of progressive criminal policy and the U.N. and the uses of comparative analysis of current literature and formal exposition on a related topic.

6940 Crimes, Criminals, and Their Treatment. Three credits. Intensive exploration of the various systems of criminal typology, including a survey of the various theories of criminal behavior and a survey of institutional treatment methods currently in use. Ex-tra-institutional treatment methods also examined.

6950 Business and Industrial Security. Three credits. Examination of the scope of the problem, the economic impact, major problems (security, employee theft, shoplifting, industrial espionage). Discussion of the responsibility and effectiveness of the criminal justice system, programs for prevention and training of employees, managers, and security personnel. Preparation of an extensive research paper which analyzes an assigned topic and summarizes current trends in the literature required.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

# Department of Economics and Finance 

John Lee, Chair<br>Business and Aerospace Building N329C

The mission of the graduate program in economics is to provide students with advanced studies in economic theory and research methodology. To accomplish its mission, the Department of Economics and Finance offers two degree programs: the Master of Arts (M.A.) with a major in Economics and the Doctor of Philosophy (Ph.D.) with a major in Economics. The department's approach to these degree programs is global, interactive, and innovative. In the M.A. program, students are offered three curricular paths: general economics, Industrial Relations, and Financial Economics,. M.A. students in economics are offered preparation for careers in private business and public service. The focus of the M.A. program is on decision analysis and applied research. Ph.D. students in economics are trained for careers in teaching and applied research. The Ph.D. provides students with the opportunity to combine advanced training in economics with educational pedagogy and research methodology.
The required test score for admission to the master's program is 30 on the Miller Analogies Test or a satisfactory score on the Graduate Records Examination (GRE). Admission to the doctoral program requires a score of 1100 or better on the GRE.

## Requirements for the Master of Arts (5000 and 6000 level)

1. Candidates entering the M.A. program must have completed certain foundation courses. Each candidate's record is carefully examined to determine whether these functional areas have been satisfactorily covered in previous academic work. The foundation areas include:
Intermediate-level Macroeconomics Intermediate-level Microeconomics Intermediate-level Quantitative Methods
The M.A. advisor will notify the student of any deficiencies in the foundation courses. Students lacking work in these areas must take the requisite undergraduate courses.
2. Candidates for the M.A. in Economics must complete a minimum of 30 semester hours if a thesis is written or a minimum of 33 semester hours if a thesis is not written.

At least 24 semester hours must be in courses numbered exclusively as 6000-level graduate courses.

## Major in Economics (General)

1. Candidates choosing a major in Economics (general) must complete a minimum of 18 semester hours of economics including ECON 6110, 6120, and 6620.
2. Candidates can include a minor in their degree programs. A minor comprises 12 hours of approved courses. A list of graduate minors can be found on page 21.
3. Students not electing a minor can include a cognate area of up to 6 semester hours in their programs. Cognate areas can be formed from courses in such fields as accounting, agriculture, finance, geography and geology, history, industrial studies, insurance, management, marketing, mathematics, political science, psychology, real estate, and sociology.
4. The student, with the assistance of the M.A. advisor, must file a Candidacy Form prior to the completion of 24 credit hours.

## Major in Economics with a Concentration in Financial Economics

The concentration in Financial Economics offers students the intellectual foundation and technical skills necessary to enter careers as financial economists and analysts in private companies and public agencies. Students majoring in Economics with a concentration in Financial Economics can meet the general M.A. core requirements by completing either an applied core (ECON 6000, 6450, and 6620 or 5620) or a theoretical core (ECON 6110, 6120, and 6620). In addition, candidates must complete ECON 6460 and FIN 6710, 6730, and 6740. An additional six hours of guided electives must be chosen from the following courses: ECON 6430, 6450, 6530, 6560; FIN 6720 or 6860. Three of the remaining six hours must include Problems in Finance (FIN 5990). The other three hours are for a general elective.

## Major in Economics with a Concentration in Industrial Relations

1. Candidates choosing the Industrial Relations concentration must complete the following courses: ECON 6000, 5620 (or 6620), 6500, 6510, and 5390. An additional 9 hours must be completed from the following courses: ECON 6520, 6440 (Industrial Relations topic only), 5510, 5490 , and 5420 . Students without substantial experience in the field of industrial relations are strongly encouraged to complete ECON 5420, 5490, and 5510 as initial courses in the Industrial Relations concentration. Up to 9 credits of substitutions may be made by passing competency tests that are administered and evaluated by industrial relations faculty. Courses designated for possible substitutions are 5390, 5420, 5490, and 5510. Before taking the competency tests the student, industrial relations faculty, and M.A. advisor will agree on the
courses to be substituted for those negated by any successfully passed competency exams. The remaining credit hour requirements are electives. Courses listed above and not selected to fulfill the above requirements may be taken as electives, but students are strongly encouraged to consider interdisciplinary options from the following: management, engineering technology and industrial studies, psychology, sociology, actuarial science, political science, and school personnel service education. The M.A. advisor in consultation with the industrial relations faculty must approve acceptable courses.

## Comprehensive Examinations

1. Candidates must successfully complete a written comprehensive examination that may be taken no more than twice. For the major in Economics, the comprehensive examination covers the three core areas: macroeconomics, microeconomics, and Econometrics I. For the major in Economics with a concentration in Financial Economics, the comprehensive examination includes macroeconomics, microeconomics, and a financial economics field examination. For the major in Economics with a concentration in Industrial Relations, the comprehensive examination encompasses four types of competencies:
a. applied technical analysis relevant to industrial relations practice including time values, regression analysis, and other computational methods that are generally based on ECON 5390, $5420,6000,6510$, or 6620 (or 5620);
b. conceptual synthesis of Industrial Relations theory, applications, and issues from required and elective course content;
c. a specialty area defined by collaboration between the student, M.A. advisor, and Industrial Relations faculty, e.g., legislation and regulation of labor markets and employment, demographic influences upon the workplace, and technology change and the workplace; and
d. a synthesis of international issues taken from the content in the core and elective courses.
2. Before taking the comprehensive examination, the student is expected to attend and actively participate in regularly scheduled departmental student/faculty workshops where research papers are presented and discussed by the participants.

## Requirements for the Doctor of Philosophy (6000 and 7000 level)

The Ph.D. in Economics provides students with the opportunity to combine advanced training in economics with educational pedagogy and applied research. Students completing the Ph.D. in Economics will have the academic and pedagogical skills necessary to teach economics at the collegiate level and to conduct applied research in economics.

## General Admissions Requirements

For admission to the doctoral program, candidates are expected to attain a GRE score of 1100 or better. On matriculation, students will complete a curriculum plan. The Ph.D. advisor must approve the curriculum plan. In some cases, it
may be possible to complete the program on a part-time basis, but the program is designed for full-time students.

## Requirements for the Ph.D. in Economics

1. Students entering the Ph.D. program in economics must hold a baccalaureate degree and meet the entrance requirements listed under the General Admissions Requirements.
2. Students entering with a baccalaureate degree are required to complete a minimum of 64 semester hours, including a minimum of 51 hours of formal coursework, a one credit hour economics workshop (two presentations), and 12 hours of dissertation research. Of the total 64 hours, 43 hours must be at the 7000 level. Up to 12 semester hours of formal coursework may be applied toward the minimum of 51 hours of formal coursework for students entering with an M.A. in economics.
3. In consultation with graduate advisor, the student must file a Candidacy Form prior to the completion of 24 credit hours.
4. Students must complete the Qualifying Examination as described on page 47 of the Graduate Catalog. Competency in economic theory is tested by qualifying examinations in microeconomic theory, and econometrics at the end of the student's first year of study. A field qualifying examination will test a candidate's competency in one applied field. This qualifying examination will be taken after completion of all the course requirements for the specific field. A field consists of a minimum of two doctoral-level (7000-level) courses plus electives as advised by the field coordinators. The field requirements are listed below.
5. Candidates must successfully defend a dissertation prospectus (page 47 of the Graduate Catalog) and, upon approval by the candidate's dissertation committee, prepare a dissertation. The student is responsible for contacting a Ph.D. faculty member about becoming the chair of the student's dissertation committee. The chair will suggest other potential committee members.
6. After completion of the dissertation, the candidate is given an oral examination dealing with the structure and content of the dissertation. The dissertation defense is discussed on page 47 of the Graduate Catalog. The candidate will be notified in writing of the committee's approval of the dissertation.

## Sample Course and Examination Schedule

The following sample schedule outlines the sequence of Ph.D. course requirements.
Fall Semester - Year 1
ECON 6100 Mathematical Methods for Economics
ECON 6110 Macroeconomics I
ECON 6120 Microeconomics I
ECON 6620 Econometrics I
Spring Semester - Year 1
ECON 7110 Macroeconomics II
ECON 7120 Microeconomics II
ECON 6630 Econometrics II

Summer - Year 1
Qualifying Examination in Macroeconomics (ECON 6110, 7110)

| Fall Semester - Year 2 |
| :--- |
| ECON $7121 \quad$ Seminar in Applied Microeconomic Theory |
| ECON $7630 \quad$ Seminar in Applied Econometrics |
| ECON $7660 \quad$ History of Economic Thought |
| Spring - Year 2 |
| Qualifying Examination in Microeconomics (ECON 6120, 7120, 7121) |
| Qualifying Examination in Econometrics (ECON 6620, 6630, 7630) |
| Spring Semester - Year $\mathbf{2}$ |
| ECON/FIN |
| ECON/FIN |
| FCON Course I |
| Elective |

## Summer - Year 2 <br> ECON/FIN Elective

Fall Semester - Year 3
ECON/FIN Field Course II
ECON/FIN Field Course III or Elective
ECON 7900 Research Seminar
Spring - Year 3
Qualifying Examination in chosen field
Spring Semester - Year 3
ECON 7500 Economics Workshop (two presentations)
ECON 7640 Dissertation Research

| Required Core Courses |  |  |
| :--- | :--- | :--- |
| ECON | 6100 | Mathematical Methods for Economics |
| ECON | 6110 | Macroeconomics I |
| ECON | 7110 | Macroeconomics II |
| ECON | 6120 | Microeconomics I |
| ECON | 7120 | Microeconomics II |
| ECON | 7121 | Seminar in Applied Microeconomic Theory |
| ECON | 6620 | Econometrics I |
| ECON | 6630 | Econometrics II |
| ECON | 7630 | Seminar in Applied Econometrics |
| ECON | 7600 | Instructional Development and Practice in Economics |
| ECON | 7660 | History of Economic Thought |
| ECON | 7900 | Research Seminar |
| ECON | 7500 | Economics Workshop |

## Fields of Study

Every student has to choose one field. A comprehensive qualifying examination tests competency in the candidate's selected field. Typically, however, students will also take their electives in their chosen fields. Certain fields such as financial economics may require students to take three or more courses in the field.

| Financial Economics |  |  |
| :---: | :---: | :---: |
| Required Courses: |  |  |
| FIN | 7460 |  |
|  |  | Seminar on Financial Markets |
| FIN | 7710 | Topics in Advanced Financial Economics |
| Potential Electives: |  |  |
| FIN | 6730 | Seminar on Financial Institutions |
| FIN | 6450 | Seminar on Monetary Policy |
| FIN | 6430 | Seminar on Public Finance |
| FIN | 6740 | Security Analysis |
| FIN | 6860 | International Financial Management |
| FIN | 6720 | Cases in Financial Management |

Required Courses:
FIN 7460/
6460 Seminar on Financial Markets
FIN 7710 Topics in Advanced Financial Economics
Potential Electives:
FIN 6730 Seminar on Financial Institutions
FIN 6450 Seminar on Monetary Policy
FIN 6430 Seminar on Public Finance
FIN 6860 International Financial Management
FIN 6720 Cases in Financial Management

Labor Economics and Employment Relations
Required Courses:
ECON 7510/
6510 Theory and Analysis in Labor Economics and Industrial Relations
ECON 7390 Social Insurance, Pensions, and Benefits
Potential Electives:
ECON 5490 Industrial Relations Legislation
ECON 5510 Unions and Collective Bargaining
ECON 6520 Special Media Projects
MGMT 6510 Current Problems in Human Resource Management and Industrial Relations
MGMT 6680 Seminar in Human Resources Management
MGMT 6770 International Management
International Economics
Required Courses:
ECON 7530/
6530 International Trade Theory and Policy
ECON 7550 Quantitative Policy Analysis in International Economics
Potential Electives:
FIN 6860 International Financial Management
ECON 6470 Seminar in Economic Growth and Development
ECON 6540 Japanese Society and Business
MKT 6850 International Marketing Seminar

## Economics of Education

## Required Courses:

ECON 7200/
6200 Economics of Education
ECON 7250 Methods of Outcome Assessment
Potential Electives:
FOED 7570 Issues in Higher Education
MGMT 6600 Study of Organizations
ECON 6520 Special Media Projects

## Courses in Economics [ECON]

5310 Public Finance II. Three credits. (Same as FIN 5310.) Prerequisites: ECON 2410 and 2420. Current issues in taxation, theory of income taxation, consumption taxes, property and wealth taxes. Advanced treatment of tax incidence, tax efficiency, income distribution, fiscal federalism, and state and local budget issues. Students are required to complete a term project resulting in a paper available for peer review and a class presentation.

5390 Employee Benefits. Three credits. (Same as FIN 5390.) Includes descriptive review and taxation, legislative, and administrative dimensions of the major components of employee benefit plans such as retirement systems, deferred compensation plans, health insurance, death benefits, disability benefits, paid and unpaid time off. Technical analysis and problem solving emphasized to develop applied skills. Social insurance and international benefits integrated.

5400 Business and Government. Three credits. Structure, conduct, and performance of American industries; public policies toward business; economic analysis of these policies.

5420 Labor and Human Resource Economics. Three credits. Current issues and theories, returns to training and education (human capital), earnings differences; theoretical interpretation and empirical economic impacts of unions, government regulation, and international forces upon labor relations and labor markets; human resource information systems (spreadsheet applications) and integration of Internet information sources and forensic analysis.

5440 International Economics. Three credits. Differences between domestic trade and international trade and foundations of international trade; economic effects of free trade and restricted trade; mechanisms of international payments and structure of balance of payments; history and contemporary issues of trade policies and world monetary systems.

5470 Economic Development of the Third World. Three credits. Conditions and problems of the less developed countries; causes, processes, and consequences of economic development; introduction to basic growth models, development theories, and strategies for development. Economic as well as noneconomic factors studied.

5490 Industrial Relations Legislation Three credits. Effects of domestic and international legislation and regulation of governments on the practical functions of labor markets and employment relations in the public and private sectors. Specific dimensions include unions and other collective and collaborative institutions, workforce diversity, and the impacts of technology. Domestic and international electronic resources heavily integrated into learning experiences based on research and analysis.

5510 Unions and Collective Bargaining. Three credits. Collective bargaining contract administration and alternative dispute resolution mechanisms. Information technology tools. Analytical focus on the impacts of total compensation agreements, strike strategies, and the interdependent influences of the union and nonunion sectors of the economy. Practical cases emphasized. A brief international comparative survey of unions and other collective relationships included.

5620 Econometrics and Forecasting. Three credits. Prerequisites: QM 2610 and MATH 1810 or equivalent. Application of mathematical and statistical techniques to economic problems. Introduces econometric model construction and estimation and related problems. Requires use of econometric computer package.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

5890 Internship in Economics. Three credits. Prerequisite: Graduate status and recommendation of advisor. Supervised work experience in cooperating business firms or government agencies together with specialized academic study relating to the work experience.

5990 Problems in Economics. Three credits. Problems for intensive study are chosen in joint consultation between student and instructor.

6000 Managerial Economics. Three credits. Prerequisites: ECON 2410 and 2420 or 4570 or equivalent. Primarily for M.B.A. students with particular attention given to business administration and finance topics including demand analysis, production and cost decisions, quantitative market analysis, capital budgeting, and alternative theories of the firm. Special emphasis on case studies, software applications, and interpretation of economic meanings of related analyses.

6030 Survey of Economic Theory. Three credits. Overview of microand macroeconomic principles with an emphasis on applications to decision making in a competitive market environment.

## May not be used for elective credit in graduate business degree programs.

6040 Survey of Employment Relations. Three credits. Survey of employment relations with emphasis on developing a general context, computational skills, and ability to conduct informed discourse on the content. Computational skills include simple time value and statistical analysis limited to calculator or spreadsheet applications. Students expected to demonstrate presentation skills utilizing different media. For current or aspiring professionals in employment relations who need to retool and/or need a course which, upon successful completion, will facilitate entry into the M.A. in Economics Industrial Relations concentration. Also a suitable elective for students in related fields of study.

6100 Mathematical Methods for Economics. Three credits. Preparation for core courses in economics. Covers all essential mathematical methods, including matrix algebra, differential and integral calculus, constrained optimization, the use of differential and difference equations in dynamic analysis, the basics of optimal control, and stochastic calculus.

6110 Macroeconomics I. Three credits. Prerequisites: ECON 3510 Measurement concepts in macroeconomics, schools of macroeconomic thought, traditional models of aggregate demand and supply, open economy models and issues, and new approaches to macroeconomics. Computer applications.

6120 Microeconomics I. Three credits. Prerequisite: ECON 6100. Intensive review of the structure of microeconomic theory including optimization algorithms, envelope theory, preference axioms, intertemporal choice, alternative forms of cost and production functions, behavior under uncertainty, pricing information, market strategies, game theory, general equilibrium, social choice, and externalities.

6200/ 7200 Economics of Education. Three credits. Prerequisite: ECON 6120 or permission. The role of education in creating human capital, the existence of externalities, the returns to education, the education "industry," and the issues surrounding education reform.

6390/ 7390 Social Insurance, Pensions, and Benefits. Three credits. Prerequisites: ECON 4390/5390 (or equivalent). An intensive survey of policy and practice in employee benefits, with an in-depth examination of pension plans. Covers an interdisciplinary mix of economics, accounting/finance, law, and regulation.

6400 Economics of Health Care. Three credits. Applications of microeconomics to analysis of the health care delivery system in the United States. Major issues include the private and public demand for health care, supply of health care, cost of health care, the pricing of health care, and the analysis of the various health care reform policies of the industry. Examines how economics can provide valuable insights into the above problems of social choice.

6430 Seminar on Public Finance. Three credits. (Same as FIN 6430.) Examines the role of government in the allocation and distribution of society's resources. Topics include theories of government sector growth, public and quasi-public goods, externalities and agency theory, transitivity and completeness of voting preferences, income redistribution and economic justice, social insurance, health care programs, tax shifting and incidence analysis, efficiency and equity in taxation, and efficiency and redistributive aspects of deficit financing. Topics may involve case studies such as budget formulation, environmental policies, payroll taxes, and alternative tax structures.

6440 Special Topics in Economics. Three credits. Independent study of a particular topic selected by the student and approved by
the instructor. Provides an opportunity to study special areas of interest for which regular courses are not offered.

6450 Seminar on Monetary Policy. Three credits. (Same as FIN 6450.) Prerequisite: ECON 3210 or equivalent recommended. Objectives and limitations of monetary policy, alternative monetary theories underlying policy decisions and the controversy among theories, transmission channels of monetary policy, alternative strategies used to achieve the objectives of monetary policy, practical considerations in the execution of monetary policy, global linkages and monetary policy, and the effects and consequences of policy decisions on economic activity and business decisions.

6460/ 7460 Seminar on Financial Markets. Three credits. (Same as FIN 6460/7460.) Prerequisite: FIN 3000 or 3010 or 6000 or equivalent. Credit flows within the U.S. and the global economies, the economic and financial forces influencing the general level of interest rates and the relationship among interest rates, the characteristics of key short- and long-term financial assets, new financial instruments, derivative instruments, global financing linkages, global linkages among financial instruments and among national economies, and interest rate risk, including the measurement and means of protection.

6470 Seminar in Economic Growth and Development. Three credits. Prerequisites: ECON 2410 and 2420 and permission of instructor. Satisfies the M.B.A. international course requirement. Critical analysis of causes, processes, and consequences of economic development; evaluation of various policies and strategies for economic development; introduction to advanced growth models and theories. Special emphasis on the less developed countries.

6500 Modern Issues in Labor and Industrial Relations. Three credits. A survey of labor market and employment relations issues evolving in our changing economic environment. Coverage includes the concepts of efficiency, equity, and ethics of market and institutional behavior and economic issues related to work force demographics and work place organization. Distinction drawn between cooperative and competitive models of economic organization and outcomes in the employer-employee relations environment. Internet labor market information sources and international comparisons incorporated.

6510/ 7510 Theory and Analysis in Labor Economics and Industrial Relations. Three credits. Prerequisite: ECON 4570 or 6000 or 4420/5420 (or equivalent of either). Recommended prerequisites: Courses or equivalent experience involving financial computations, spreadsheet applications, and statistical software. Micro and macro theory of labor demand and supply and government policy implications, economic theory and measurement of human capital, returns to education, discrimination, income distribution, and impacts of international trade.

6520 Special Media Projects. Three credits. Nontraditional learning experiences. Approval includes faculty and student written mutual agreement and conformance to departmental standards for independent study. Examples of special projects include production of CDs, DVDs, cable TV programming, Internet projects, internships that clearly add nonredundant learning experiences, or highly applied projects that demonstrate the integration of information technologies into mainstream business or other organization decision making.

6530 International Trade Theory and Policy. Three credits. Prerequisite: ECON 5440 or equivalent background recommended. Advanced study of the key topics covered and introduction to other topics not covered in ECON 5440. Critical examination of
major issues and evaluation of latest theories in international trade and monetary relations.

6540 Japanese Society and Business. Three credits. (Same as SOC 6710.) Japanese economy, business practices, and social and physical environment in comparison with those in other countries, particularly the United States.

6550 Studies in Economic Development: Pacific Asia. Three credits. Prerequisite: ECON 5470 or equivalent recommended. Analysis and evaluation of processes of economic development with focus on a specific area of the United States or of the world. Area covered varies.

6560 Mergers, Acquisitions, and Corporate Restructuring. Three credits. (Same as FIN 6560.) Issues covered include the reasons firms merge, buyer and seller motivations, the assessment of merger prospect value, merger waves and their consequences, the concentration of economic power resulting from mergers, policies toward mergers, the effects of takeover defenses, and the effects of mergers on the economy.

6620 Econometrics I. Three credits. (Same as FIN 6620.) Prerequisite: ECON 4620 or equivalent. Focuses on the use of regression analysis in economics. Emphasis on using econometric software packages to investigate actual economic problems. A prerequisite for ECON 6630.

6630 Econometrics II. Three credits. Prerequisite: ECON 6620 or permission of instructor. Covers more advanced topics in econometrics, including recent model adequacy tests, Box-Jenkins time series analysis, dynamic modeling, systems of equations, discrete and limited dependent variable models, pooled regression. Emphasizes practical applications in various computing environments.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6660/ 7660 History of Economic Thought. Three credits. Prerequisite: Graduate status. The evolution of economic thought from Aristotle to John Maynard Keynes as shaped by economic, social, political, and intellectual forces.

6730 Seminar on Financial Institutions. Three credits. (Same as FIN 6730.) Focus on the common and distinctive aspects of the provision of financial services and the management of risk associated with those services. Roles, characteristics, and operation of financial institutions, constraints that these institutions face in meeting that objective, regulatory environment within which they operate, risks that they face and the management of those risks, evolution experienced during the 1980s and 1990s, and the probable course of change in the years ahead.

6999/ 7999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7110 Macroeconomics II. Three credits. Economic growth and dynamic models; models of consumption and investment behav-
ior. Monetary and fiscal policy issues. Alternative modeling approaches: macroeconometric models vs. calibrated simulation models.

7120 Microeconomics II. Three credits. Prerequisites: ECON 6120 and 6620 or approved equivalents. Selected topics in microeconomics.

7121 Seminar in Applied Microeconomic Theory. Three credits. Prerequisite: ECON 6120. Advanced methods used in practical applications of economics. Topics include index numbers and productivity analysis; indicators and allocational effects of price distortions; multimarket partial equilibrium and computable general equilibrium models; construction, simulation, and interpretation of multisectoral growth models.

7250 Methods of Outcome Assessment. Three credits. Prerequisites: ECON 7120 and 7630. Deals with outcomes assessment of the educational process. Covers techniques to rank educational institutions, methods to assess the effectiveness of educational programs, ways to evaluate individual courses or instructors, and methods to assess student learning. Key quantitative tools that are used in outcomes assessment, including data envelope analysis, stochastic frontier models, and hierarchical linear models. Also considers the political and incentive problems that typically arise in implementing assessment methods in practice.

7500 Economics Workshop. One credit. Students present material related to their dissertation proposals or ongoing dissertation research to peers and the graduate faculty in a formal workshop setting. Credit is awarded after a student completes two separate workshop presentations that are judged satisfactory by the attending graduate faculty.

7550 Quantitative Policy Analysis in International Economics. Three credits. Prerequisites: ECON 6530, 7120, and 7630. Applica-tions-oriented course emphasizing quantitative tools to analyze policy issues related to international trade, exchange rates, sectoral resource allocation, and growth. Topics include an extended introduction to trade policy analysis using a general equilibrium modeling framework. Practical aspects of general equilibrium modeling emphasized and applied to a particular issue of interest, such as the impact of trade liberalization on labor markets and growth or the impact of trade and exchange rate distortions on resource allocation and growth.

7600 Instructional Development and Practice in Economics. Three credits. Workshop atmosphere where students learn and practice presenting key economic concepts, using new technology in the classroom (including remote link technology), organizing and structuring courses and individual classes, using assessment tools effectively, and avoiding dealing with conflict in the classroom. Offers preparation to teach hands-on undergraduate classes in economics.

7610 Economic Internship. Three credits. Prerequisites: FOED 7520 and SPSE 7550. Supervised teaching of undergraduate economics courses.

7630 Seminar in Applied Econometrics. Three credits. Prerequisites: ECON 6630. Third course in the econometrics sequence. Advanced econometric methods and their use in the analysis of empirical problems in macroeconomics and microeconomics. Includes applications of recent panel data estimators, qualitative and limited dependent variable models, structural time series models, and the simulation of multiple-equation models. Emphasis on case studies that allow students to integrate knowledge from economic theory and econometrics.

7640 Dissertation Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled, student should register for at least one credit hour of doctoral research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

7710 Topics in Advanced Financial Economics. Three credits. (Same as FIN 7710.) Prerequisites: ECON/FIN 7460, ECON 7121, and ECON 7630. Major topics in financial economics including applied interest rate analysis, choice under uncertainty, the capital asset pricing model, consumption-based asset pricing model, factor models, the efficient markets hypothesis, and models of time-varying market volatility with an emphasis on empirical applications of theoretical concepts using Microsoft Excel. Cultivation of practical programming skills is designed to complement application of economic theory to financial markets.

7900 Research Seminar. Three credits. Students practice writing academic papers, critiques, and monographs in economics and finance, with some emphasis on developing a viable dissertation proposal. Includes identifying a topic, delineating its scope, fitting it into the literature, finding data, choosing an appropriate methodology, presenting the results and conclusions, and comparing them to the existing literature; pitfalls to avoid when working on dissertations and academic papers.

## Courses in Finance [FIN]

5310 Public Finance II. Three credits. (Same as ECON 5310.) Prerequisites: ECON 2410 and 2420. Current issues in taxation, theory of income taxation, consumption taxes, property and wealth taxes. Advanced treatment of tax incidence, tax efficiency, income distribution, fiscal federalism, and state and local budget issues. Students are required to complete a term project resulting in a paper available for peer review and a class presentation.

5360 Management of Financial Institutions. Three credits. Prerequisite: FIN 3210 or equivalent or consent of instructor. Application of principles of institution management with a focus on operations, policy making, asset, liability, and capital management of commercial banks and nonbank financial institutions.

5390 Employee Benefits. Three credits. (Same as ECON 5390.) Includes descriptive review and taxation, legislative, and administrative dimensions of the major components of employee benefit plans such as retirement systems, deferred compensation plans, health insurance, death benefits, disability benefits, paid and unpaid time off. Technical analysis and problem solving emphasized to develop applied skills. Social insurance and international benefits integrated.

5430 Real Property Valuation. Three credits. Prerequisite: FIN 2450 or consent of instructor; FIN 3010 strongly recommended. Theory and methods of real property valuation. Qualitative and quantitative analysis incorporated to appraise residential and in-come-producing properties. Comparable sales, cost-depreciation, and income capitalization analysis emphasized.

5590 Problems in Real Estate. Three credits. Current controversial conditions in the field of real estate with concentration on major problems and policies in managing real estate and other related resources.

5710 Insurance in Estate Planning. Three credits. Prerequisite: FIN 3610 or permission of instructor. Insurance as it may relate to estate planning examined in detail. Focus on estate planning principles including the problems of estate liquidity, taxation, governmental regulation, and costs involved in handling estates.

Also included are ownership provisions and beneficiary designations, settlement options, and trusts.

5730 Insurance Company Operations. Three credits. Prerequisite: FIN 3610 or permission of instructor. Insurance marketing, underwriting, reinsurance, rate making, claims adjusting, loss control activities, and other functions and activities.

5750 Risk Management. Three credits. Prerequisite: FIN 3610 or permission of instructor. Analysis of major sources of liability loss exposures and the insurance coverages designed to meet those exposures. Noninsurance techniques such as loss control and risk transfer are also discussed.

5790 Problems in Insurance. Three credits. Prerequisite: FIN 3610 or permission of instructor. Application of various insurance coverages to fulfillment of personal, business, and social needs. Special problems are chosen or assigned in areas of the student's interest in joint consultation between student and instructor.

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

5890 Internship in Finance. Three credits. Prerequisite: Graduate status and recommendation of advisor. Supervised work experience in cooperating business firms or government agencies together with specialized academic study relating to the work experience.

5990 Problems in Finance. Three credits. Chosen in joint consultation between student and instructor.

6000 Survey of Financial Management. Two credits. Principles and tools of financial management including time value of money, security valuation, funds acquisition and capital budgeting, and cost of capital. May not be used for elective credit in graduate business degree programs.

6430 Seminar on Public Finance. Three credits. (Same as ECON 6430.) Examines the role of government in the allocation and distribution of society's resources. Topics include theories of government sector growth, public and quasi-public goods, externalities and agency theory, transitivity and completeness of voting preferences, income redistribution and economic justice, social insurance, health care programs, tax shifting and incidence analysis, efficiency and equity in taxation, and efficiency and redistributive aspects of deficit financing. Topics may involve case studies such as budget formulation, environmental policies, payroll taxes, and alternative tax structures.

6440 Readings in Finance. One to three credits. Independent read-ings-based study of a particular topic in finance selected by the student and approved by the instructor. Provides an opportunity to study special areas of interest for which regular courses are not offered.

6450 Seminar on Monetary Policy. Three credits. (Same as ECON 6450.) Prerequisite: ECON 3210 or equivalent recommended. Objectives and limitations of monetary policy, alternative monetary theories underlying policy decisions and the controversy among theories, transmission channels of monetary policy, alternative strategies used to achieve the objectives of monetary
policy, practical considerations in the execution of monetary policy, global linkages and monetary policy, and the effects and consequences of policy decision on economic activity and business decisions.

6460/ 7460 Seminar on Financial Markets. Three credits. (Same as ECON 6460/7460.) Prerequisite: ECON 3210 or equivalent. Credit flows within the U.S. and the global economies, the economic and financial forces influencing the general level of interest rates and the relationship among interest rates, the characteristics of key short- and long-term financial assets, new financial instruments, derivative instruments, global financing linkages, global linkages among financial instruments and among national economies, and interest rate risk, including the measurement and means of protection.

6550 Real Estate Investment. Three credits. Prerequisites: FIN 2450 and 3010. Development of a framework for making real estate investment decisions and for analyzing real estate investment alternatives.

6560 Mergers, Acquisitions, and Corporate Restructuring. Three credits. (Same as FIN 6560.) Issues covered include the reasons firms merge, buyer and seller motivations, the assessment of merger prospect value, merger waves and their consequences, the concentration of economic power resulting from mergers, policies toward mergers, the effects of takeover defenses, and the effects of mergers on the economy.

6620 Econometrics I. Three credits. (Same as ECON 6620.) Prerequisite: ECON 4620 or equivalent. Focuses on the use of regression analysis in economics. Emphasis on using econometric software packages to investigate actual economic problems. A prerequisite for ECON 6630.

6710 Financial Analysis. Three credits. Prerequisite: FIN 3010 or 6000. Theory of corporate finance with applications. Techniques and problems for maximizing wealth through the application of discounted cash flow analysis. Emphasis on risk, capital budgeting, and capital structure.

6720 Cases in Financial Management. Three credits. Prerequisite: FIN 6710. Applications-oriented approach to managerial prob-lem-solving. Topics may include working capital management, capital budgeting, cost of capital estimation, lease/purchase decisions, bond refunding, and international issues.

6730 Seminar on Financial Institutions. Three credits. (Same as ECON 6730.) Focus on the common and the distinctive aspects of the provision of financial services and the management of risk associated with those services. Roles, characteristics, and operation of financial institutions, constraints that these institutions face in meeting that objective, regulatory environment within which they operate, risks they face and the management of those risks, evolution experienced during the 1980 s and 1990s, and the probable course of change in the years ahead.

6740 Security Analysis. Three credits. Prerequisite: FIN 3810 or consent of instructor. Interpretation of financial statements, valuation and selection of securities, security risk, legal and regulatory issues, and agency problems.

6860 International Financial Management. Three credits. Prerequisite: FIN 3010 or 6000. International capital markets, exchange rate exposure, risk management, and other multinational finance issues. Essential not only for United States exporters, but also for those facing competition from abroad.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7710 Topics in Advanced Financial Economics. Three credits. (Same as ECON 7710.) Prerequisites: ECON/FIN 7460, ECON 7121, and ECON 7630. Major topics in financial economics including applied interest rate analysis, choice under uncertainty, the capital asset pricing model, consumption-based asset pricing model, factor models, the efficient markets hypothesis, and models of time-varying market volatility with an emphasis on empirical applications of theoretical concepts using Microsoft Excel. Cultivation of practical programming skills is designed to complement application of economic theory to financial markets.


# Department of Educational Leadership 

James O. Huffman, Chair Jones Hall 323

The Department of Educational Leadership offers the Specialist in Education degree (Ed.S.) and the Master of Education degree (M.Ed.) with majors in Administration and Supervision and Curriculum and Instruction. The Ed.S. in Administration and Supervision offers specializations in K-12 public schools and higher education.
The M.Ed. in Administration and Supervision offers a concentration in Library Science and specializations in K-12 public schools and higher education. The M.Ed. in Curriculum and Instruction offers a concentration in English as a Second Language. A graduate minor in Library Science is available.

Normally, for admission to the specialist's or master's programs, a satisfactory score on the Miller Analogies Test, the Graduate Record Examination, or the Praxis II National Teachers Examination (Principles of Learning and Teaching) is required.
Applicants for the Ed.S. and M.Ed. degrees should submit a completed application, transcripts, three letters of reference, and verification of test scores to the Graduate Office. Once the completed file is received in the department, an advisor is assigned and the file is reviewed by the Educational Leadership Graduate Admission Board. Students should consult an advisor to determine what courses to schedule each semester.

Students pursuing an M.Ed. or Ed.S. degree must be admitted to the program prior to the completion of 12 semester hours of credit.

## Doctor of Arts Educational Component

The Doctor of Arts degree is offered by the Departments of Chemistry and History. Requirements are described under the appropriate departmental heading. The student should consult with the education advisor to determine education course schedules.

## Professional Education Core:

FOED 7520 Problems of Evaluation in Higher Education
FOED 7560 Seminar in College Teaching
SPSE 7540 Overview of Higher Education
SPSE 7550 Instructional Development in Higher Education

## Requirements for the Specialist in Education

Candidate must

1. hold a master's degree.
2. complete a minimum of 30 semester hours with a minimum of 15 at the 7000 level.
3. have teacher licensure. The licensure requirements will be waived for the higher education specialization and other special circumstances. In the event licensure is waived, some prerequisite courses may be required prior to full admission into the program. A student seeking a licensure waiver must initiate a written request with the advisor, seek approval from the chair and dean of the College of Education and Behavioral Science, and forward the request to the departmental office, Jones Hall 321.
4. be admitted by the Educational Leadership Graduate Admissions Board prior to completion of 12 semester hours.
5. file a Candidacy Form with the Graduate Office prior to the completion of 24 hours.
6. successfully complete a written comprehensive examination or oral presentation of research project during the semester of graduation (exam may be retaken once during a subsequent semester).

## Administration and Supervision Major (Ed.S.) Specialization: K-12 Public Schools

Those seeking licensure should consult the department chair.

## Required Courses (9-12 semester hours)

SPSE 7200 Administrative Behavior: Theory into Practice
FOED 7060 Seminar in Educational Foundations
and
Each student will select either the research path (SPSE 7010 and FOED 7610) or the practicum path (SPSE 7190)

Specialized Core ( 12 semester hours) with at least 3 hours at the 7000 level; selected with an advisor
Electives ( 6 semester hours) selected with advisor

## Administration and Supervision Major (Ed.S.) <br> Specialization: Higher Education

## Required Courses (12 semester hours)

SPSE 7200 Administrative Behavior: Theory into Practice
FOED 7060 Seminar in Educational Foundations
and
Each student will select either the research path (SPSE 7010 and FOED 7610) or the practicum path (SPSE 7190)

Specialized Core ( 12 semester hours) with at least 3 hours at the 7000 level; selected with an advisor
Electives ( 6 semester hours) selected with advisor

## Curriculum and Instruction Major (Ed.S.)

## Required Courses ( 12 semester hours)

SPSE 7130 The Curriculum: Structures and Functions
FOED 7060 Seminar in Educational Foundations
and
Each student will select either the research path (SPSE 7010 and FOED 7610) or the practicum path (SPSE 7190)

Specialized Core ( 12 semester hours) with at least 3 hours at the 7000 level; selected with an advisor
Electives ( 6 semester hours) selected with an advisor

## Requirements for the Master of Education

Candidate must

1. hold a bachelor's degree.
2. complete 33 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours. (Students should refer to the appropriate major for specific requirements.)
3. have teacher licensure. The licensure requirements will be waived for the higher education specialization and other special circumstances. In the event licensure is waived, some prerequisite courses may be required prior to full admission into the program. A student seeking a licensure waiver must initiate a written request with the advisor, seek approval from the chair and dean of the College of Education and Behavioral Science, and forward the request to the departmental office, Jones Hall 321.
4. be admitted by Educational Leadership Graduate Admissions Board prior to completion of 12 semester hours.
5. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
6. successfully complete a written comprehensive examination during the semester of graduation (may be retaken once during a subsequent semester).

## Administration and Supervision Major (M.Ed.) Specialization: K-12 Public School <br> Students must be admitted to the program prior to the completion of 12 semester hours.

Completion of this program will meet course requirements for Tennessee administration licensure. Additional state requirements must be met. Requirements for licensure should be checked in the Teacher Licensing Office, McWherter Learning Resources Center 170.

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Required Courses (33 semester hours)
FOED 6020 Educational Foundations
FOED 6030 School and Community Relations
FOED 6610 Analysis and Application of Educational Research
SPSE 6010 Organization and Administration of Public Schools
SPSE 6040 Supervision of Instruction
SPSE 6050 Instructional Leadership
SPSE 6120 Professional Internship, 9 credits; (may substitute for SPSE 6040, 6400, 6600)
SPSE 6340 School Finance
SPSE 6390 School Law
SPSE 6400 The Principalship
SPSE 6430 Introduction to Curriculum Development
SPSE 6600 Microcomputers in Educational Administration
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## Administration and Supervision Major (M.Ed.) Specialization: Higher Education

Required Courses ( 9 semester hours)
FOED 6020 Educational Foundations
FOED 6610 Analysis and Application of Educational Research
SPSE 6080 Studies in Leadership
Specialized Core (12 semester hours)
SPSE 6530 Administration of Higher Education
SPSE 6600 Microcomputers in Educational Administration
SPSE 6210 Legal Issues in Higher Education
FOED 6580 The College Student

Electives (12 semester hours)
To be selected with approval of advisor

## Administration and Supervision Major (M.Ed.) Concentration: Library Science

Required Courses (33-39 semester hours)
LIBS 5150 Books and Media for Children
LIBS 5160 Books and Media for Young People and Adults
LIBS 6110 School Library Administration
LIBS 6120 Classification and Cataloging Media and Materials
LIBS 6130 Principles of Librarianship
LIBS 6170 Basic Reference Materials
LIBS 6180 Library Science Practicum PreK-6
LIBS 6190 Library Science Practicum 7-12
LIBS 6200 School Library Media Center Skills and Issues
SPSE 6430 Introduction to Curriculum Development
FOED 6610 Analysis and Application of Educational Research
For students seeking initial teacher licensure, a student teaching experience ( 12 semester hours) is required.

## Curriculum and Instruction Major (M.Ed.) <br> Students must be admitted to the program prior to the completion of $\mathbf{1 2}$ hours of coursework.

The Curriculum and Instruction program is designed to foster the development of teaching skills that result in increased pupil performance. By analyzing curriculum choices and strategies, along with best teaching practices, those who complete this program will be better equipped to provide an environment in which students engage in relevant and meaningful learning activities.

## Required Courses ( 9 semester hours)

FOED 6020 Educational Foundations
FOED 6610 Analysis and Application of Educational Research
SPSE 6430 Introduction to Curriculum Development

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Specialized Core (18 semester hours)
YOED 6680 Issues and Trends in Teaching and Learning
SPSE 6140 Teacher Leadership for School Improvement
SPSE 6250 Seminar in Curriculum Improvement
SPSE 6450 Elementary and Middle School Curriculum OR
    SPSE 6480 Instructional Excellence in Secondary Schools
SPSE 6640 Microcomputers in the K-12 Educational Setting
FOED 6630 Educational Tests and Measurements
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## Electives ( 6 semester hours)

To be selected with approval of advisor

## Curriculum and Instruction Major (M.Ed.) <br> Concentration: English as a Second Language

## Core Courses ( 9 semester hours)

SPSE 6430 Introduction to Curriculum Development
FOED 6020 Educational Foundations
FOED 6610 Analysis and Application of Educational Research

## Required Courses ( 15 semester hours)

YOED 6020 Reading, Writing, and Learning Methods for ESL
FOED 6850 Cultural Issues in Education
FL 6700 Introduction to Linguistics
F L 6900 Issues in Foreign Language Acquisition
ENGL 5540 Approaches to Teaching ESL Grammar and Writing

## Electives (6 hours)

SPSE 6480 Instructional Excellence in Secondary Schools
ENGL 5510 Modern English Grammar and Usage*
*Prerequisite to ENGL 5540

The following courses have also been approved as electives if students have already taken SPSE 6480 and/or ENGL 5510:
SPED 6800 Exceptional Children and Youth
PSY 6530 Psychology of Reading and Reading Development
READ 6710 Adolescent Literacy
Practicum ( 3 semester hours):*
SPSE 6710 Practicum in English as Second Language for PreK-3, 1 hour credit
SPSE 6720 Practicum in English as Second Language (4-8), 1 hour credit
SPSE 6700 Practicum in English as Second Language for Grades 9-12, 1 hour credit
*Ten hours of field experience must be completed at each level

## Minors

A minor in Library Science consists of 18 semester hours. A minor in Education consists of 12 semester hours selected with the consent of the advisor. The Master of Arts in Teaching and the Master of Science in Teaching degrees require a minor in Education to be approved by the minor advisor.

## Non-degree, "Plus 30," and Add-on Endorsements

Students taking courses for licensure renewal, add-on endorsements, or "plus 30" upgrade on teacher licensure should register as non-degree students. Students enrolling in 6000level courses must hold a bachelor's degree, and students enrolling in 7000-level courses must hold a master's degree. Non-degree-seeking students cannot register for 7000-level courses without departmental permits.

## Courses in Foundations of Education [FOED]

6020 Educational Foundations. Three credits. Assists educational personnel in developing contexts and concepts in which educational problems and issues may be understood through awareness of findings in humanistic and behavioral studies.

6030 School and Community Relations. Three credits. The reciprocal relationship of the two and the skills necessary for analyzing problems and utilizing data and technical skills in planning effective school-community relations programs.

6580/ 7580 The College Student. Three credits. The changing nature of the college student with emphasis on institutional efforts to provide for the development of the student.

6610 Analysis and Application of Educational Research. Three credits. It is recommended that this class be taken within the first 9 hours of the M.Ed. program. Qualitative and quantitative research applicable to the field of education. Both producers and consumers of educational research with a literature review presented to support possible solutions to significant hypotheses or problems.

6630 Educational Tests and Measurements. Three credits. Basic concepts in educational measurement and evaluation; evaluation as a part of the teaching-learning process; utilization of evaluation for instructional improvement.

6850 Cultural Issues in Education. Three credits. Ways the school and community can give greater understanding of and improve the life chances of minority group members.

6999/7999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other
graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7060 Seminar in Educational Foundations. Three credits. Opportunities to think reflectively and critically on the historical, philosophical, and psychological foundations of education and attendant implications.

7080 Contributions of Psychology to Education. Three credits. Concepts and generalizations of the various theories of psychology and their relationships to education in such areas as motivation, retention, evaluation, discipline, capacity, practice, understanding, transfer-creative thinking, problem solving, and methods of instruction.

7520 Problems of Evaluation in Higher Education. Three credits. Three semester hours of statistics recommended. Introduction to testing theory, design, and construction. Use of the evaluation process and instruments; instructions, advising, and research situations. Required of all Doctor of Arts students.

7560 Seminar in College Teaching. Three credits. Development of the student with focus on teaching and learning. Required of all Doctor of Arts students.

7570 Issues in Higher Education. Three credits. Higher education in America and its historical, philosophical, political, and sociological background, development, and relationships. Current trends and problems, particularly those relating to the financial and legal aspects.

7610 Directed Individual Educational Research. Three credits. Prerequisite: SPSE 7010. It is recommended that this class be taken the following semester after enrollment in SPSE 7010. Culmination of research sequence (FOED 6610 and SPSE 7010) which requires studying a professional educational problem through completing and presenting a research project.

7611 Directed Individual Educational Research. One credit. Prerequisite: FOED 7610. Must be taken each semester (not including summer) until research is completed. Completion of the research problem begun in FOED 7610. Students should continue to register for FOED 7611 each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

## Courses in Youth Education [YOED]

5110 Directed Teaching, Grades 7-12. Twelve credits. Prerequisites: All required professional education courses; appropriate special methods course(s); minimum grade point average of 2.50 overall and in the teaching major including undergraduate study; passing scores on the NTE Tests of Communication Skills and General Knowledge; admission to teacher education. A full-day supervised teaching experience in a public school classroom. Pass/Fail grading.

5510 The Teaching Internship, Grades 7-12. Nine credits. Supervised on-the-job student teaching internship. Available only to those with at least one year of paid teaching experience in the major in which endorsement is sought. Applicant must meet all prerequisites for Directed Teaching.

6020 Reading, Writing, and Learning Methods for ESL. Three credits. (Same as F L 6020.) Provides teaching ideas for promoting
oral, reading, and writing development in English for K-12 English learners. Language acquisition theory, classroom organization, teaching strategies, and assessment procedures for effective English learner instruction.

6100 Aviation Workshop. Four credits. (Same as AERO 6100.) A first course in aerospace education; provides an overview of aerospace historically and in the future.

6110- International Aerospace Education Seminar. Three credits each.
6112 Acquaints teachers with aerospace implications on an international scale. Outstanding international points of interest in six or more countries visited. Offered in Session IV of the summer.
6110 Europe/Mideast
6111 The Americas
6112 The Far East
6540 Problems in Aerospace Education. One, two, or three credits. (Same as AERO 6540.) Content varies with needs of individual students who are interested in making a specialized study of current problems in the field of aerospace education.

6680 Issues and Trends in Teaching and Learning. Three credits. Emphasis on examining current issues and trends in teaching and learning.

6700 Advanced Aviation Workshop. Four credits. (Same as AERO 6700.) Builds on prior experiences in aviation/aerospace. Essential for the prospective teacher of aerospace education courses at any level.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Courses in School Personnel Services Education [SPSE]

5210 General Methods Including A/V. Three credits. A general course.
5220 Technology in Teaching. Three credits. Prerequisites: Admission to Teacher Education Program. Use of selected hardware and software in the teaching/learning process. Design and creation of inexpensive teaching and learning materials.

5260 Problems in Education. One, two, or three credits. Opportunity for individuals or groups to work on problems related to their individual topics. Credit to be determined at the time of scheduling.

6000/7000 Professional Negotiations. Three credits. Concepts and principles of operating a school district under the master contract. Special emphasis on the laws of various states relative to the professional negotiations process.

6010 Organization and Administration of Public Schools. Three credits. Basic concepts, principles, and practices in local, state, and federal organization and administration of education.

6040 Supervision of Instruction. Three credits. Development and purposes of supervision involving principles and techniques for organization and facilitation of programs at the school and system level.

6050 Instructional Leadership. Three credits. Research on student learning, effective teaching, and effective schools. Attention given to processes for promoting school improvement.

6080/ 7080 Studies in Leadership. Three credits. Roles, responsibilities understandings, and behavior patterns in effective administrative and supervisory personnel. Developing sensitivity to individuals, the nature and structures of groups, and the problems of communication within and among groups and individuals.

6090/ 7090 Seminar: Conducting Program for School Improvement. Three credits. Emphasizes motivation, identification of needs and goals, planning and organization, and utilization of various resources as components of successful school improvement programs.

6120/ 7120 Professional Internship. Nine credits. Requires approval of departmental chair and agreement of superintendent of the school district. May be substituted for SPSE 6040, 6600, and 6400. Educational administration and supervision experiences learned in the school setting under the supervision of a sponsoring mentor. Internship in cooperating school systems.

6140 Teacher Leadership for School Improvement. Three credits. Assessing standard teaching practices, analyzing the relationship between effective teaching and effective schools, and developing strategies for instructional and school improvement. Includes experiences to help students become more reflective in their daily teaching.

6210/ $\mathbf{7 2 1 0}$ Legal Issues in Higher Education. Three credits. The legal framework as it pertains to higher education and its operations. Special attention given to rights of students as well as professors. Law cases, constitutional provisions, attorney general's opinions, rules and regulations of the Tennessee Board of Regents, Tennessee Board of Trustees, and the Tennessee Higher Education Commission studied and discussed.

6250/ 7250 Seminar in Curriculum Improvement. Three credits. For the advanced major in curriculum development utilizing small group or seminar approach. Issues and research in curriculum improvement analyzed critically.

6310 Supervising Student Teachers. Three credits. Administration and supervision of student teaching.

6330 Elementary and Middle School Principalship. Three credits. The organization and administration of elementary and middle schools with emphasis on current practices, trends, and problems.

6340 School Finance. Three credits. State, local, and federal financing of education; includes taxation trends, school funds, and apportionment; evaluation of equalization plans; state bond loan programs; development and administration of school budgets; education and economy.

6380 Secondary School Administration. Three credits. Organization and administration of the modern high school with emphasis on current practices and problems.

6390 School Law. Three credits. Legal framework within which public schools operate. Special attention given to the legal rights and liabilities of school personnel and school board members. School laws, case laws, constitutional provisions, attorneys' general rulings, and regulations of the State Board of Education emphasized.

6400 The Principalship. Three credits. Organization and administration of the modern K-12 school with emphasis on current practices and problems.

6430 Introduction to Curriculum Development. Three credits. Opportunity to study, discuss, and evaluate modern practices and procedures in curriculum development and reorganization in schools and school systems.

6450 Elementary and Middle School Curriculum. Three credits. Concepts, processes, and skills related to curriculum development and evaluation.

6480 Instructional Excellence in Secondary Schools. Three credits. Development of creative approaches for secondary classroom teaching in order to stimulate creative and critical thinking abilities of students.

6500/ 7500 Studies in Education: Administration. One, two, or three credits. Individual or small group study and/or research in educational administration which provides an opportunity for indepth study and specialization for majors. To be structured for student needs by teacher. Repeatable up to six hours.

6520/ 7520 Studies in Education: Curriculum. One, two, or three credits. Individual or small group study and/or research in the area of curriculum development. To be structured for student needs by teacher. Repeatable up to six hours.

6530/ 7530 Administration of Higher Education. Three credits. Complexity of the structure of higher education (national, regional, state, and local) and how it is organized. Attention given to the interrelationships of the institution and its internal and external constituencies.

6550 Supervised Field Experience. Three credits. Direct field experience in appropriate areas of school operation which will meet specific needs related to such individual matters as career plan, position changes (principals, supervisors, superintendents, curriculum directors, etc.), or needed competencies.

6560/ 7560 Studies in Education: Supervision. One, two, or three credits. Individual or small group study and/or research in the area of supervision of instruction. To be based on individual needs and structured by teacher. Repeatable up to six hours.

6590/ 7590 Independent Study in Higher Education. One, two, or three credits. A practicum in higher education. Course will vary to meet the needs of individual students who are interested in making a specialized study of current problems in the field of higher education.

6600 Microcomputers in Educational Administration. Three credits. Offers preparation for incorporating microcomputer technology into the school work-place. Student designs a model school administrative unit by applying the microcomputer skills and understanding acquired.

6640 Microcomputers in the K-12 Educational Setting. Three credits. Offers preparation for incorporating microcomputer technology into the K-12 school environment. Student designs a com-puter-assisted instruction project by applying the microcomputer skills and understanding acquired.

6700 Practicum in English as Second Language for Grades 9-12. One credit. A practicum course for the ESL teacher. Includes ten hours field experience in the ESL classroom with grades 912 students from different cultures.

6710 Practicum in English as Second Language for PreK-3. One credit. A practicum course for the ESL teacher. Includes ten hours field experience in the ESL classroom with preK-3 students from different cultures.

6720 Practicum in English as a Second Language (4-8). One credit. A practicum course for the ESL teacher. Includes ten hours field experience in the ESL classroom with grades 4-8 students from different cultures.

6900 Learning Systems and Instructional Design. Three credits. Assessment of effectiveness and efficiency of various learning systems and learning modules. Stresses need for systematic approaches to instruction. Practice in stating behavioral objectives, motivation, adaptation, evaluation, and systems assessment in which media are utilized as integral parts of learning modules.

6910 Problems in Learning Resources. Three credits. Consideration of recent developments in curriculum, teaching, physical facilities, and innovations in library service and media utilization. Includes participation in projects such as media and materials for handicapped, educational TV, library skills, graphic communication, library activities for specific subjects or groups, and individualization of instruction.

6920 Automation of Library Processes. Three credits. Application of data processing and computerization techniques to acquisitions, cataloging, circulation, and business operations of libraries and media centers. Includes an examination of newer developments such as MARC, facsimile transmission, and automated retrieval of data. Basic technical courses recommended prior to taking this course.

6960 Preparation and Utilization of Instructional Materials. Three credits. (Same as LIBS 6960.) Discussion and examination of teaching aids.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7010 Educational Research Methodology. Three credits. It is recommended that this class be taken within the first 9 hours of the program. FOED 6610 or appropriate research course is recommended prior to this course. Designing research studies, including development of understandings, as well as skills and techniques, needed in gathering, structuring, interpreting, and presenting data required for educational research. SPSE 7010 is a prerequisite for enrollment in FOED 7610, which is recommended to be taken the following semester.

7020 Administration of School Personnel. Three credits. School district personnel problems. Consideration by school administrators of relationship between the school and the community with special reference to the administrative role.

7040 Seminar in Supervision. Three credits. Identification and investigation of the problems of supervision and research; experimentation in the use of supervisory techniques.

7050 School Business Management. Three credits. Reading, discussion, and problem solving in the field of business administration.

7100 The Junior Community College. Three credits. Prerequisite: Open only to doctoral candidates. History, philosophy, organi-
zation, administration, current developments, and problems in two-year colleges.

7110 Readings in Educational Administration. Three credits. Review of the research literature on the social and political processes involved in the development and implementation of public policy and legislation relating to education at the national, state, and local levels.

7130 The Curriculum: Structures and Functions. Three credits. Scope, sequence, organization, and priorities involved in the development of "continuity of educational experience" from kindergarten through grades 13-14.

7150 Curriculum Study and Instructional Design. Three credits. Readings in current research relative to basic and emerging ideas of curriculum development and instructional design.

7160 Practicum in Curriculum Development. Three credits. Principles and practices of curriculum construction applied through simulated and field experiences.

7190 Professional Field Experience. Six credits. Provides direct field experience in appropriate areas of education in collaboration with the University, the school mentor, and the student.

7200 Administrative Behavior: Theory into Practice. Three credits. An exploration of the relevant new developments in the field of educational administration, including recent concepts and research.

7320 Educational Facilities and Transportation Services. Three credits. Development of competencies in the areas of school plant planning, maintenance and utilization, financing, analysis of transportation, survey of school plant, site selection, and educational specifications.

7540 Overview of Higher Education. Three credits. Higher education in America. Attention given to its historical, philosophical, political, and sociological background, development, and relationships. Includes current trends and problems, particularly those which relate to the financial and legal aspects of higher education. Required of all Doctor of Arts students.

7550 Instructional Development in Higher Education. Three credits. Prerequisite: FOED 7560. Addresses effective college teaching, instructional strategies, and use of technology in teaching at the higher education level. Required of all Doctor of Arts students.

## Courses in Library Science [LIBS]

5150 Books and Media for Children. Three credits. Materials suitable for elementary school children including a study of leisure time interests and curricular needs, criteria for evaluating materials, and related aids used in their selection.

5160 Books and Media for Young People and Adults. Three credits. Basically the same approach as LIBS 5150 but adapted to the secondary school and adult level.

6110 School Library Administration. Three credits. Purpose, structure, and function of the school library media center and the library program.

6120 Classification and Cataloging Media and Materials. Three credits. Simplified procedures for classifying books and audio/visual materials, cataloging routines, and filing.

6130 Principles of Librarianship. Three credits. Presents the broad field of library service and librarianship as a profession. Emphasis on the place of the library in the instructional program of the school and on administrative details.

6170 Basic Reference Materials. Three credits. Evaluation and use of basic reference materials for the PreK-12 school library. Discussion of the elements of reference work.

6180 Library Science Practicum PreK-6. Three credits. Prerequisite: 12 hours of library science courses. Opportunity to observe successful materials specialists/librarians at work and to participate in actual operations followed by seminar opportunities for exchange of ideas. 100 contact hours required.

6190 Library Science Practicum 7-12. Three credits. Prerequisite: 12 hours of library science courses. Opportunity to observe successful materials specialists/librarians at work and to participate in actual operations followed by seminar opportunities for exchange of ideas. 100 contact hours required.

6200 School Library Media Center Skills and Issues. Three credits. Prerequisites: LIBS 5150, 6110, and 6120. Aspects of the school library media centers, including oral presentations, use of library collection maintenance software, instruction and teaching in the library, and research into a current issue in librarianship.

6511 Directed Student Teaching (Library Science). Twelve credits. Prerequisites: 18 hours of library science courses: FOED 2110 and 6610; SPSE 3010, 6010, 6430; YOED 3050; minimum grade point average of 2.5 overall; admission to teacher education. A full-day, full semester of supervised teaching experience in a public school library.

6960 Preparation and Utilization of Instructional Materials. Three credits. (Same as SPSE 6960.) Discussion and examination of teaching aids.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Course in Education [TELC]

6006 Teachers as Agents for Change. Three credits. Prerequisites: Program admission. Current issues, trends, and problems commonplace to teaching in public school settings. Offers analytic experiences designed to assist those teaching on Alternative C, Vocational, and Occupational licenses meet requirements for professional licensure.

# Department of Elementary and Special Education 

Connie Jones, Chair<br>Jones Hall 225

The Department of Elementary and Special Education offers the Master of Education degree with majors in Curriculum and Instruction, Reading, and Special Education as well as graduate minors in Curriculum and Instruction, Reading, and Special Education. The major in Curriculum and Instruction offers concentrations in Early Childhood Education, Elementary School Education, and Middle School Education. Concentrations in Mildly/Moderately Disabled Students, Preschool Disabled Students, Severely/Profoundly Disabled Students, and Vision Disabilities are available through the Special Education major. The Specialist in Education degree is offered with a major in Curriculum and Instruction and concentration in Elementary Education.
The department also offers the Master of Education in Advanced Studies in Teaching and Learning-Regents Online Degree Program (RODP).
Students seeking admission to the Master of Education program are expected to score at least 30 on the Miller Analogies Test or 700 on the Graduate Record Examination or the minimum on a National Teachers Examination that meets Tennessee licensure standards. For admission to the specialist's program, a score of 800 on the Graduate Record Examination or a score of 40 on the MAT is expected.
Applicants for the Ed.S. and M.Ed. degrees in Curriculum and Instruction must have elementary teaching licensure, the attainment of which may require additional undergraduate courses prior to the completion of the degree. Applicants for the M.Ed. degree in Special Education must have a teaching license in special education and a 3.00 undergraduate GPA.

## Requirements for the Specialist in Education

In order to be admitted the candidate must

1. hold a master's degree.
2. have a minimum of three years teaching experience in an elementary setting.
3. have an initial conference with a graduate advisor in the department.

In order to complete the degree, the candidate must

1. complete a minimum of 30 semester hours.
2. file a candidacy form with the Graduate Office prior to the completion of 24 credit hours.
3. successfully complete a thesis pertaining to an area of emphasis within the scope of elementary education.
4. successfully complete an oral defense.

## Curriculum and Instruction Major (Ed.S.) Concentration: Elementary Education

## Required Core (9 semester hours)

SPSE 7010 Educational Research Methodology
FOED 7060 Seminar in Educational Foundations
SPSE 7130 The Curriculum: Structures and Functions
Specialized Courses ( 15 semester hours)
FOED 7080 Contributions of Psychology to Education
ELED 6290/ 7290 Inquiry in the Classroom
ELED 7220 Seminar in Elementary Education
ELED 7250 From Policy to Practice in American Public Schools
ELED 7640 Ed.S. Thesis Research
Elective Courses ( 6 semester hours)
To be selected with the consent of the advisor
Applicants having previously met any of the course requirements above may, with the consent of the advisor, choose options. Requirements for licensure should be checked in the Teacher Licensing Office, McWherter Learning Resources Center 170.

## Requirements for the Master of Education

In order to be admitted, the candidate must

1. have completed undergraduate prerequisites.
2. hold a current teaching license.
3. have an initial conference with an appropriate graduate advisor in the department.
4. have at least 2.75 undergraduate GPA for full admission and a 2.50 undergraduate GPA for conditional admission.
In order to complete the degree, the candidate must
5. complete a minimum of 33 semester hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours.
6. file a Candidacy Form with the Graduate Office prior to the completion of 21 credit hours.
7. successfully complete a written comprehensive examination to be taken in the last semester of coursework (may be taken no more than twice).

## Curriculum and Instruction Major (M.Ed.) Concentration: Early Childhood Education

## Required Core (9 semester hours)

FOED 6020 Educational Foundations
FOED 6610 Analysis and Application of Educational Research
SPSE 6430 Introduction to Curriculum Development
Specialized Core ( 12 semester hours)
ELED 6010 The Teacher as Reflective Practitioner
(prerequisite for all ELED courses)

| ELED | 6011 The Teacher as Reflective Practitioner (must be taken in last semester of coursework) |
| :---: | :---: |
| ELED | 6090 Creating Learning Environments for Young Children |
| ELED | 6200 The Classroom as Community |
| ELED | 6620 Assessment of Teaching and Learning |
| Specialized Courses (6 semester hours) |  |
| READ | 6000 Foundations of Reading |
| READ | 6720 Diagnostic and Remedial Practices in the Improvement of Reading |
| READ | 6760 Early Literacy |
| READ | 6120 Current Issues in Reading Instruction |
| ELED | 6000 Teaching Writing |
| ELED | 6030 The Early Childhood Practitioner, K-4 |
| ELED | 6130 Current Issues in Elementary Language Arts |
| ELED | 6140 Current Issues in Elementary Social Studies |
| ELED | 6170 The Multi-Age Classroom |
| ELED | 6180 Current Issues in Elementary Mathematics |
| ELED | 6190 Current Issues in Elementary Science |
| ELED | 6230 Integrating Curriculum and Teaching, K-8 |
| ELED | 6250 Technological Tools for Thinking and Learning |
| ELED | 6300 Play Education and the Curriculum |
| ELED | 6310 Play Education and Social-Emotional Learning |
| ELED | 6320 Play Education and Literacy |
| ELED | 6400 Teaching the Special Needs Learner in the Heterogenous Classroom |

## Electives (6 hours)

To be selected within the range of specialized courses or with the consent of the advisor.

## Concentration: Elementary School Education

Required Core ( 9 semester hours)
FOED 6020 Educational Foundations
FOED 6610 Analysis and Application of Educational Research
SPSE 6430 Introduction to Curriculum Development
Specialized Core (12 semester hours)
ELED 6010 The Teacher as Reflective Practitioner (prerequisite for all ELED courses)
ELED 6011 The Teacher as Reflective Practitioner (must be taken in last semester of coursework)
ELED 6090 Creating Learning Environments for Young Children OR
ELED 6100 The Early Adolescent Learner
ELED 6200 The Classroom as Community
ELED 6620 Assessment of Teaching and Learning
Specialized Courses (6 semester hours)
READ 6000 Foundations of Reading
READ 6120 Current Issues in Reading Instruction
READ 6710 Adolescent Literacy
READ 6720 Diagnostic and Remedial Practices in the Improvement of Reading
READ 6760 Early Literacy
ELED 6000 Teaching Writing
ELED 6030 The Early Childhood Practitioner, K-4
ELED 6130 Current Issues in Elementary Language Arts
ELED 6140 Current Issues in Elementary Social Studies
ELED 6170 The Multi-Age Classroom
ELED 6180 Current Issues in Elementary Mathematics
ELED 6190 Current Issues in Elementary Science
ELED 6230 Integrating Curriculum and Teaching, K-8
ELED 6250 Technological Tools for Thinking and Learning
ELED 6300 Play Education and the Curriculum
ELED 6310 Play Education and Social-Emotional Learning
ELED 6320 Play Education and Literacy
ELED 6400 Teaching the Special Needs Learner in the Heterogeneous Classroom

## Electives ( 6 semester hours)

To be selected within the range of specialized courses or with the consent of the advisor.

## Concentration: Middle School Education

## Required Core (9 semester hours)

FOED 6020 Educational Foundations
FOED 6610 Analysis and Application of Educational Research
SPSE 6430 Introduction to Curriculum Development
Specialized Core ( 12 semester hours)
ELED 6010 The Teacher as Reflective Practitioner (prerequisite for all ELED courses)
ELED 6011 The Teacher as Reflective Practitioner (must be taken in last semester of coursework)
ELED 6100 The Early Adolescent Learner
ELED 6200 The Classroom as Community
ELED 6620 Assessment of Teaching and Learning
Specialized Courses (6 semester hours)
READ 6000 Foundations of Reading
READ 6120 Current Issues in Reading Instruction
READ 6710 Adolescent Literacy
READ 6720 Diagnostic and Remedial Practices in the Improvement of Reading
ELED 6000 Teaching Writing
ELED 6130 Current Issues in Elementary Language Arts
ELED 6140 Current Issues in Elementary Social Studies
ELED 6170 The Multi-Age Classroom
ELED 6180 Current Issues in Elementary Mathematics
ELED 6190 Current Issues in Elementary Science
ELED 6230 Integrating Curriculum and Teaching, K-8
ELED 6250 Technological Tools for Thinking and Learning
ELED 6300 Play Education and the Curriculum
ELED 6310 Play Education and Social-Emotional Learning
ELED 6320 Play Education and Literacy
ELED 6400 Teaching the Special Needs Learner in the Heterogenous Classroom

## Electives

To be selected within the range of specialized courses or with the consent of the advisor.

## Minor in Curriculum and Instruction

Students desiring a graduate minor in Curriculum and Instruction in one of the three concentrations described above-Early Childhood, Elementary School Education, or Middle School Education-should complete 18 semester hours in elementary education to include ELED 6090 or 6100, 6200 , and 6620. This does not meet licensure requirements in elementary education.

## Reading Major (M.Ed.)

The Master of Education in Reading degree requires 36 semester hours and leads to the Reading endorsement, Reading Specialist, PreK-12. Three years successful classroom experience as a licensed teacher are required. The PRAXIS 10300 is required.
Required Core ( 30 semester hours - *required for licensure)
READ 6000 Foundations of Reading*
READ 6710 Adolescent Literacy*
READ 6720 Diagnostic and Remedial Practices in the Improvement of Reading*
READ 6730 Curriculum and Supervision of Reading*
READ 6750 Research Seminar in Reading*
READ 6760 Early Literacy*

| READ | 6790 The Reading Practicum* |
| :--- | :--- |
| ELED | 6500 Learning and Teaching* |
| ELED | 6510 Language Arts* |
| ELED | 6620 Assessment of Teaching and Learning* |


|  |  |
| :---: | :---: |
| READ | 5130 Corrective Reading in the Elementary School |
| READ | 5460 Teaching Reading in the Content Area |
| READ | 6120 Current Issues in Reading Instruction |
| READ | 6260 Individualizing Reading |
| DYST | 6000 Introduction to Dyslexia |
| DYST | 6010 Identifying Students with Dyslexia |
| DYST | 6011 Interventions for Dyslexia |
| DYST | 6020 Adolescents with Dyslexia and other Literacy Difficulties |
| ELED | 6000 Teaching Writing |
| ELED | 6130 Current Issues in Elementary Language Arts |
| ELED | 6320 Play Education and Literacy |
| ELED | 6400 Teaching the Special Needs Learner in the Heterogeneous Classroom |
| LIBS | 5150 Books and Media for Children |
| LIBS | 5160 Books and Media for Young People and Adults |

Special Education Options (3 semester hours)
To be selected with consent of advisor
Electives ( 9 semester hours)
To be selected with consent of advisor

## Minor in Reading

A minor is available in Reading, the content of which is determined through collaborative consultation with the student's major advisor and the advisor for Reading.

## Special Education Major (M.Ed.) Concentration: Mildly/Moderately Disabled Students

## Required Core ( 9 semester hours)

SPED 6780 Issues in Special Education
FOED 6610 Analysis and Application of Educational Research
Elective in research methodology

## Concentration Courses ( 15 semester hours)

SPED 6300 Theoretical Perspectives on Mild/Moderate Disabilities
SPED 6310 Issues in Assessment of Mild/Moderate Disabilities
SPED 6330 Theories of Instruction for Mild/Moderate Disabilities
SPED 6370 Mildly/Moderately Disabled Adolescents and Adults
SPED 6380 Collaborative/Consulting Skills in Special Education

## Restricted Electives (9 semester hours)

To be selected with consent of advisor

## Concentration: Preschool Disabled Students

Required Core ( 3 semester hours)
FOED 6610 Analysis and Application of Educational Research

## Concentration Courses ( 15 semester hours)

SPED 6900 Characteristics of Preschool Children with Disabilities
SPED 6910 Developmental Assessment
SPED 6920 Laboratory Experience I
SPED 6930 Methods of Working with Children Who Are Developmentally Delayed
SPED 6950 Laboratory Experience II
Restricted Electives ( 15 semester hours)
To be selected with consent of advisor

## Concentration: Severely/Profoundly Disabled Students

## Required Core ( 9 semester hours)

SPED 6780 Issues in Special Education
FOED 6610 Analysis and Application of Educational Research Elective in research methodology

## Concentration Courses ( 15 semester hours)

SPED 6380 Collaborative/Consulting Skills in Special Education
SPED 6400 Characteristics and Needs of Severely/Profoundly Disabled
SPED 6430 Theories of Instruction for Severely/Profoundly Disabled Students
SPED 6910 Developmental Assessment
CDFS 6300 Application of Child Development Principles I
Restricted Electives (9 semester hours)
To be selected with consent of advisor

## Concentration: Vision Disabilities

## Required Core (9 semester hours)

SPED 6380 Collaborative/Consulting Skills in Special Education
SPED 6780 Issues in Special Education
FOED 6610 Analysis and Application of Educational Research
Concentration Courses ( 24 semester hours)
SPED 6500 Anatomy and Physiology of the Eye
SPED 6510 Introduction to Braille and Communication Skills for the Visually Impaired
SPED 6520 Advanced Braille and Communication Skills for the Visually Impaired
SPED 6530 Educational Procedures for the Visually Impaired
SPED 6540 Advanced Educational Procedures for the Visually Impaired
SPED 6550 Orientation and Mobility for the Classroom Teacher
SPED 6560 Nature and Needs of the Visually Impaired
SPED 6570 Practicum in Special Education (Vision) OR
SPED 5510 Teaching Internship: Special Education

## Special Education Master's—Non-Licensed

Persons who do not hold a license in special education but wish to work toward a master's degree in mild/moderate or severe/profound special education may ask for an exception to the license prerequisite. This would allow the individual to complete a master's degree but the degree would not lead to licensure. Persons who complete this degree will not be licensed to teach special education upon completion of the degree.

## Minor in Special Education

Students desiring a minor at the graduate level in Special Education must complete 18 semester hours in Special Education to include SPED 6020, 6800, and 12 additional semester hours of 6000 courses in Special Education. This does not meet licensure requirements in Special Education.

## Master of Education in Advanced Studies in Teaching and LearningRegents Online Degree Program (RODP)

The Master of Education in Advanced Studies in Teaching and Learning (M.Ed.) with a concentration in Childhood Lit-
eracy Reading is offered through the Regent's Online Degree Program (RODP), and is delivered following the standard protocol established for the delivery of RODP courses and programs. The mission of this program is to provide advanced professional preparation in the area of reading and language arts for practicing teachers.

| Program of Study (33 hours) |  |
| :---: | :---: |
| Required |  |
| ASTL 6700 | Portfolio Development |
| ASTL 6701 | Teacher as Learner |
| ASTL 6721 | Theory and Foundation of Developmental Literacy (Literacy I) |
| ASTL 6703 | Knowledge of the Learner |
| ASTL 6723 | Understanding and Implementing Best Practices in Teaching Beginning Literacy (Literacy II) |
| Specialized |  |
| ASTL 6705 | Assessment of Learning |
| ASTL 6706 | Learning Strategies/Instructional Strategies |
| ASTL 6725 | Understanding and Implementing Best Practices for Continued Literacy Growth in the Middle Grades (Literacy III) |
| ASTL 6726 | Diagnosing Literacy Problems K-8 (Literacy IV) |
| ASTL 6709 | Action Research |
| ASTL 6729 | Remediation of Literacy Problems K-8 (Literacy V) |
| Specialized Courses |  |
| ASTL 6721, 6723, 6725, 6726, 6729 |  |
| For more www.tn.r | mation, refer to the RODP Web site at degrees.org. |

## Courses in Elementary Education [ELED]

5110 Directed Teaching Grades K-8. Twelve credits. Prerequisites to enrollment in the course include ELED 4010 and 4020 or 4030 and 4040, 3150, 4350 or 4400; SPED 3010; minimum grade point average of 2.50 overall and in the major; admission to Teacher Education program; passing scores on the NTE Tests of Communication Skills and General Knowledge. Fulltime, 15week semester of supervised teaching experience in the public schools. Pass/Fail.

5200- Observation and Participation. Three credits. Directed labora-
5201 tory experiences for teachers desiring to add an endorsement to their certificates. Includes language arts, math, science, social studies, art, and music.
5200 Kindergarten
5201 Grades 1-6
5260 Problems in Elementary Education. One to three credits. A problem-oriented course, on or off campus, planned and designed for individuals, school faculty, school systems, or other professional groups that will provide opportunities for in-service education related to assessed needs. Credit toward a degree limited to six semester hours.

5510 The Teaching Internship, Grades 1-8. Nine credits. A supervised internship available only to those with at least one year of paid teaching experience in the major in which endorsement is sought. Applicants must meet all prerequisites for student teaching.

6000 Teaching Writing. Three credits. An in-depth exploration of students' efforts to become writers. Presents theoretical and practical strategies for establishing an effective writing environment based on current research.

6010 The Teacher as Reflective Practitioner. Two credits. Articulates the role of and explores the varied dimensions of the process of reflective teaching as it may be utilized by the elementary, special education, reading, or secondary teacher. Prerequisite for all Curriculum and Instruction (Early Childhood Education, Elementary School Education, and Middle School Education) candidates.

6011 The Teacher as Reflective Practitioner. One credit. A culminating course summarizing and synthesizing the knowledge acquired throughout the graduate program. Must be taken in last semester of graduate work.

6030 The Early Childhood Practitioner, K-4. Three credits. Emphasis on the emerging theories which have influenced current programs.

6090 Creating Learning Environments for Young Children. Three credits. Prerequisite: ELED 6010. In-depth analysis of social, emotional, language, and cognitive variables that impact young children's learning and allow teachers to plan and maintain proactive environments. Required for those students wishing to concentrate in Early Childhood Education.

6100 The Early Adolescent Learner. Three credits. Prerequisite: ELED 6010. Reflects on the early adolescent while focusing on the student-centered school environment and the appropriately wellbalanced curriculum. Required for those students wishing to concentrate in Middle School Education.

6130 Current Issues in Elementary Language Arts. One credit. Prerequisite: ELED 6010. Overview of current issues surrounding the teaching of language arts.

6140 Current Issues in Elementary Social Studies. One credit. Prerequisite: ELED 6010. Overview of current issues and trends surrounding the teaching of social studies. Topics will vary from semester to semester.

6170 The Multi-Age Classroom. One credit. Prerequisite: ELED 6010. Examines the basic alternatives and tools that have been shown to be effective in multi-age classrooms in both primary and middle grades.

6180 Current Issues in Elementary Mathematics. One credit. Prerequisite: ELED 6010. Overview of current issues and trends surrounding the teaching of mathematics. Topics will vary from semester to semester.

6190 Current Issues in Elementary Science. One credit. Prerequisite: ELED 6010. Investigates current issues relating to the study and teaching of elementary school science. Topics will vary from semester to semester.

6200 The Classroom as Community. Three credits. Prerequisite: ELED 6010. Explores the classroom community with respect to definitions and practice. Teachers will reflect on how their beliefs and attitudes influence practice. Required for all students.

6210 Seminar on Current Innovations and Trends in Elementary Education. Three credits. Prerequisite: ELED 6010. Recent research in child development, school organization, curriculum, and evaluation.

6220 Seminar in Early Childhood Education. Three credits. Review of issues, programs, and research in early childhood education.

6230 Integrating Curriculum and Teaching, K-8. Three credits. Prerequisite: ELED 6010. Assists elementary and middle school
teachers in organizing, assessing, and planning instruction in an integrated program.

6250 Technological Tools for Thinking and Learning. Three credits. Prerequisite: ELED 6010. Learning environments supported by computer technology that promote knowledge construction. Special emphasis on use of the Internet and the design and development of a hypermedia learning environment.

6290/ 7290 Inquiry in the Classroom. Three credits. An in-depth study of the inquiry process as it relates to teachers in the classroom. Theory and practice combine as teachers engage in their own research to improve classroom instruction.

6300 Play Education and the Curriculum. One credit. Prerequisite: ELED 6010. Articulates the role of play for children's cognitive learning. A theoretical analysis will facilitate early childhood, elementary, and special educator's ability to design quality play experiences that promote children's learning.

6310 Play Education and Social-Emotional Learning. One credit. Prerequisite: ELED 6010. Promotes elementary and special education teachers' abilities to plan and implement quality play experiences that promote children's social and emotional learning.

6320 Play Education and Literacy. One credit. Prerequisite: ELED 6010. Relationship between play and literacy development highlighted. Course content will enable teachers to plan for play experiences that promote children's abilities to read, write, listen, and speak.

6400 Teaching the Special Needs Learner in the Heterogeneous Classroom. Three credits. Prerequisite: ELED 6010 (prerequisite requirement for elementary education majors only). Helps develop skills, beliefs, and attitudes necessary for effectively incorporating and teaching special needs learners in a heterogeneous classroom.

6500 Learning and Teaching. Three credits. Promotes understanding of human learning and development necessary to engender competent, caring professionals by providing opportunities to describe, compare, and contrast various theories in order to create appropriate learning environments.

6510 Language Arts. Three credits. Explores language learning and teaching. Introduces various theories about cognition, language, and language learning, including second language acquisition and various strategies for teaching language arts. Public school practicum required.

6620 Assessment of Teaching and Learning. Three credits. Prerequisite: ELED 6010 (or taken concurrently with 6010 by Elementary Education major only). Familiarizes teachers with assessment techniques that focus on the complex relationship between learning and instruction. Required for all students.

6870 Home-School Interaction. Three credits. Includes approaches, activities, and materials related to parent education.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7220 Seminar in Elementary Education. Three credits. Explores contemporary issues in education as they relate to the individual
teacher, the school as an institution, the school clientele, and the community. Allows the student to adjust individual educational philosophy to a changing society and schools; gives contiguity to other educational experiences.

7250 From Policy to Practice in American Public Schools. Three credits. The effect of public policy on educational practices. Emphasis on exploring policy variations within the educational practices in the U.S. and around the world with a particular emphasis on elementary education.

7260 Problems in Elementary Education. One to six credits. Prerequisite: Nine semester hours of graduate-level courses in elementary education.

7640 Ed.S. Thesis Research. One to six credits. Prerequisite: Six semester hours of 7000 -level courses in elementary education. Supervised, in-depth study on an individual or group basis of an area of elementary education. Student may register two semesters for three hours credit each semester or for six hours credit one semester. Open only to post-master's degree students.

## Courses in Reading [READ]

5130 Corrective Reading in the Elementary School. Three credits. Prerequisite: A reading methods or literacy course. The modification of assessment and instruction for the resolution of reading problems in the elementary classroom.

5460 Teaching Reading in the Content Area. Three credits. Emphasis on teaching reading in content subjects such as mathematics, science, and social studies in upper elementary, middle school, and secondary schools. Specific suggestions for activities and lesson strategies included. (Available on permission-of-department basis only.)

6000 Foundations of Reading. Three credits. Prerequisite: A reading methods or literacy course. Planning and developing a reading program through extensive reading in the field and seminar participation. Special emphasis on the reading process.

6120 Current Issues in Reading Instruction. One to three credits. Specific issues and trends affecting reading instruction in today's classrooms. Repeatable up to three hours of various topics.

6260 Individualizing Reading. Three credits. Theoretical background, organization, and implementation of individualizing reading through the self-selection of reading materials. Content applicable to elementary, middle school, secondary, adult, and special education teachers.

6710 Adolescent Literacy. Three credits. Approaches to effective literacy enhancement in middle and secondary school programs. Suggestions for meeting the literacy needs of typical and atypical adolescent literacy learners.

6720 Diagnostic and Remedial Practices in the Improvement of Reading. Three credits. Prerequisite: READ 6000 or permission of instructor. Formal and informal tools to document and define a reading difficulty as well as approaches/strategies to overcome such difficulties.

6730 Curriculum and Supervision of Reading. Three credits. The role of the reading specialist. Focuses on preparing reading specialists to work with students and adults in school settings. Planning in-service presentations, grant writing, critiquing materials, and effective reading programs explored.

6750 Research Seminar in Reading. Three credits. Prerequisite: READ 6000, its equivalent, or permission of the instructor. An investigation of significant research related to reading with emphasis on classroom practices, group analysis, and individual study. (Available on permission-of-department basis only.)

6760 Early Literacy. Three credits. A methods course that concentrates on beginning reading and emergent literacy issues in developing reading and writing.

6790 The Reading Practicum. Three to six credits. Prerequisite: READ 6720 or equivalent. A supervised practice in teaching children with various types of reading and learning problems. Student may enroll for 3 hours credit or 6 hours credit in a single semester. May be repeated for up to 6 credits; however, only 3 credits may apply toward the degree.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Courses in Special Education [SPED]

5240 Methods and Techniques of Behavior Management. Three credits. Overview of various approaches to behavior management. Application of various approaches in different special education settings. Basis of evaluation of various behavior change techniques.

5260 Problems in Special Education A-Z. One to three credits. A problem-oriented course, on or off campus, planned and designed for individuals, a school faculty, school system, or other professional groups that will provide opportunities for pre- or in-service education related to assessed needs. Not more than 6 semester hours credit in independent study (SPED 6840) and/or problems (SPED 5260) can be applied toward a degree or licensure.

5320 Directed Teaching in Special Education (Self-contained). Nine credits. Prerequisites: ELED 3150, 4010, 4020; SPED 6200, 6800; full admission to Directed Teaching. A full-day, ten-week supervised teaching experience in a public classroom. Pass/Fail.

5350 Directed Teaching in Special Education (Resource room). Nine to twelve credits. Prerequisites: ELED 3150; ELED 4010, 4020; SPED 6200 and 6800; full admission to Directed Teaching. A full-day, ten-week supervised teaching experience in a public classroom. Pass/Fail.

5510 Teaching Internship: Special Education. Nine credits. A supervised teaching experience. Available only to those with at least one year of paid teaching experience in the major in which endorsement is sought. Applicants must meet all prerequisites for student teaching. Pass/Fail.

6020 Overview of Special Education. Three credits. Theories and techniques of providing instruction to exceptional individuals. Designed for individuals without prior specialized experience and/or course work in special education. Not for degree credit.

6200 Educational Diagnostics. Three credits. The role of the special educator in the assessment process; formal and informal assessment devices and procedures; involvement of parents in the
evaluation; precision teaching; diagnostic and prescriptive teaching; writing IEPs.

6270 Characteristics and Needs of the Mentally Retarded Child. Three credits. Cognitive, affective, motor, social, and language development of the mentally retarded.

6280 Characteristics and Needs of the Emotionally Disabled Child. Three credits. A survey of theories and research relative to emotional/behavioral problems of children; discussion of classroom models for remediation and specific techniques appropriate for teacher use.

6300 Theoretical Perspectives on Mild/Moderate Disabilities. Three credits. Reviews the various perspectives on mild/moderate disabling conditions from a historical perspective. Viability of each perspective examined. Implications of each for assessment and intervention considered.

6310 Issues in Assessment of Mild/Moderate Disabilities. Three credits. Prerequisite: SPED 6300. A variety of tests and assessment tools within the various theoretical frameworks they represent. Considers the development of diagnostic batteries based on such tests. Particular attention given to the significance of the theoretical perspectives in selecting and interpreting data collected.

6330 Theories of Instruction for Mild/Moderate Disabilities. Three credits. Prerequisite: SPED 6310. A variety of instructional approaches within the various theoretical frameworks from which each evolved. Considers the development and evaluation of IEPS through an integration of learner characteristics, instructional approaches, and educational needs.

6370 Mildly/Moderately Disabled Adolescents and Adults. Three credits. The unique status of public school students, ages 16-21 years with mild/moderate disabilities. Focus on career, vocational, and transitional services. Highlights specific concerns and problems in adulthood.

6380 Collaborative/Consulting Skills in Special Education. Three credits. Assistance in developing skills needed for consulting with parents, students, teachers, administrators, and others in the development and implementation of individualized education programs for disabled students.

6400 Characteristics and Needs of Severely/Profoundly Disabled. Three credits. In-depth survey of severely/profoundly disabled students and their needs. Emphasis on cognitive, motor, social, communicative, behavioral, and physical characteristics of this population.

6430 Theories of Instruction for Severely/Profoundly Disabled Students. Three credits. Advanced methods and techniques for teaching severely/profoundly disabled students.

6500 Anatomy and Physiology of the Eye. Three credits. Examines structures of the eye and visual system and diseases/conditions that affect vision. Considers various screening instruments to use for making referrals to eye specialists. Attention given to administration and interpretation of screening instruments.

6510 Introduction to Braille and Communication Skills for the Visually Impaired. Three credits. Offers teachers and professionals who work with visually impaired and blind students skills and competencies in reading and writing braille.

6520 Advanced Braille and Communication Skills for the Visually Impaired. Three credits. Prerequisite: SPED 6510. Reinforces
and extends skills learned in SPED 6510. Formatting textbooks and trade books required by visually impaired students in schools. Emphasis placed on learning to use abacus, slate and stylus, and correction slate. Transcription according to Library of Congress standards.

6530 Educational Procedures for the Visually Impaired. Three credits. Presents students with roles and responsibilities of the teacher of the visually impaired, including adaptations of curriculum, environment, equipment, and methods. Available resources at local, state, and national levels. Particular attention given to the decision-making processes required, such as type of reading medium required for specific tasks, use of low-vision aids, appropriateness of various types of modifications, and adaptations of regular curriculum.

6540 Advanced Educational Procedures for the Visually Impaired. Three credits. Necessary skills to conduct functional vision assessments of students of normal intelligence as well as those with multiple disabilities. Assessing communication skills for the visually impaired.

6550 Orientation and Mobility for the Classroom Teacher. Three hours. Basic orientation and mobility techniques to teach visually impaired students to enable them to move around the school environment safely. Included are concept development, protective techniques, basic and advanced sighted guide techniques, and the use of tactual maps.

6560 Nature and Needs of the Visually Impaired. Three credits. Insights into problems associated with visual loss and its impact on individuals, family relations, and seeing populations. Also addresses advantages and limitations of adaptations and specialized instruction, equipment, devices, and aids. Examines the role and effect of various organizations and professionals on services for visually impaired persons.

6570 Practicum in Special Education (Vision). Three credits. Understanding of eye conditions that result in visual disabilities and their implications; training in determining most appropriate modifications. Experiences in assessment of functional vision of students with visual disabilities and multiple disabilities; designed to facilitate application of these skills in real-life experiences with visually impaired and blind learners.

6710 Action Research in Special Education. Three credits. Prerequisite: FOED 6610 or equivalent. Presents skills necessary to conduct classroom research for the purpose of improving learning opportunities for diverse learners.

6720 Working with Parents. Three credits. Understanding the concerns and needs of parents of children who have special needs. Also presents strategies and techniques for working effectively with parents.

6740 Affective Education in the Classroom. Three credits. Theoretical basis for the role of the school in providing instruction in the affective domain. Emphasis on the translation of theories of emotional/social development into educational strategies.

6780 Issues in Special Education. Three credits. Analysis of current issues in the field. Emphasis on the analysis of relevant research.

6800 Exceptional Children and Youth. Three credits. Introduction to problems in identification, etiology, and educational treatment of mentally retarded, gifted, physically and emotionally challenged, learning disabled, and culturally disadvantaged children and youth.

6810 Characteristics and Needs of the Learning Disabled Child. Three credits. An understanding of the causes and characteristics. Formal and informal evaluation instruments. An investigation of various educational approaches to learning disabilities, their theoretical bases, and practical implications.

6840 Independent Study: Special Education. One to three credits. Prerequisite: Consent of the advisor. Enables students to develop and conduct a study based on individual professional interests. No more than 6 semester hours credit in Independent Study (SPED 6840) and/or Problems (SPED 5260) can be applied toward a degree or licensure.

6850 Characteristics and Needs of the Severely Handicapped Child. Three credits. An in-depth survey covering the characteristics and needs for serving the severely disabled. Includes how to develop a program and the IEP.

6860 Characteristics and Needs of the Gifted Child. Three credits. Characteristics, needs, psychological and educational considerations, and identification procedure for gifted children.

6870 Habilitation of Mentally Retarded and Multiple Handicapped Young Adults. Three credits. An in-depth look. Various habilitation models, how they are designed, and how they function.

6880 Educational Procedures in the Education of the Gifted. Three credits. Prerequisite: SPED 6860. Reviews various theoretical models of learning and teaching that are most often used in developing curriculum for the gifted learner. Application of the models is stressed.

6900 Characteristics of Preschool Children with Disabilities. Three credits. Includes an in-depth study of young children delayed in their development. Focus on developmental needs.

6910 Developmental Assessment. Three credits. Evaluative and diagnostic instruments and procedures used with very young and/or multiple disabled individuals.

6920 Laboratory Experience I. Three credits. Practicum experience in settings serving preschool children who have developmental delays. Students will spend 60 hours in each of two practicum settings.

6930 Methods of Working with Children Who Are Developmentally Delayed. Three credits. Current theories, practices, and procedures used to develop programs for preschool children who are developmentally delayed (ages birth to 5 years).

6950 Laboratory Experience II. Three credits. Practicum experience in settings serving preschool children who have developmental delays. Students will spend 60 hours in each of two practicum settings.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Courses in Dyslexic Studies [DYST]

6000 Introduction to Dyslexia. One credit. Prerequisite: Permission of the instructor and bachelor's degree or advanced degree in education or a related field. Provides an overview of dyslexia and offers an understanding of this syndrome. The significance
of the genetic contribution as this relates to brain structure and function will be applied to issues of assessment and intervention.

6010 Identifying Students with Dyslexia. Two credits. Prerequisites: Permission of the instructor and bachelor's degree or advanced degree in education or related fields; three years of successful professional employment; DYST 6000. Details the profile of dyslexia and develops competency in interpreting appropriate testing instruments within a battery designed to differentiate dyslexia from other reading/spelling problems. Develops competency in using assessment data to plan instruction.

6011 Interventions for Dyslexia. Two credits. Prerequisites: Permission of instructor; DYST 6000 and 6010; three years of successful professional employment. Details the crucial elements of intervention for children with dyslexia and increases competence in choosing appropriate programs based on student characteristics.

6012 Multisensory Teaching Strategies. Three credits. Prerequisite: Permission of the department and bachelor's degree or advanced degree in the education field. Multisensory teaching of reading, spelling, and handwriting. Participants learn theory and teaching strategies in class and apply their knowledge while tutoring a student during the course. Critiques of tutoring lessons will be provided daily.

6013 Practicum in Multisensory Teaching. One credit. Prerequisites: Permission of instructor; DYST 6012. Focuses on multisensory strategies for teaching advanced skills such as syllabication and structural analysis. Participants apply their knowledge while tutoring a student twice a week for ten weeks. Students submit two videotapes of lessons and supporting materials to the professor for critique.

6020 Adolescents with Dyslexia and Other Literacy Difficulties. Three credits. Prerequisite: Permission of instructor and bachelor's degree or advanced degree in the education field. Overview of literacy difficulties faced by adolescents with particular emphasis on dyslexia. Develops competency in assessing and planning for literacy instruction, within and beyond the general education classroom setting in middle and high school.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Courses in Advanced Studies in Teaching and Learning [ASTL]

6701 Teacher as Learner. Three credits. Introduces hardware and software used to create effective literacy learning experiences. Opportunity to further professional development of educators through effective use of technology and to promote and develop reflective learners-learners who are able to use technology to enhance and expand their learning environments.

6706 Strategies of Learning and Instruction. Three credits. Prerequisites: ASTL 6700 and 6701. Examines learning theories and studies their influence on current instructional practices. Students will be asked to reflect on metacognitive processes involved in the decision-making phase of classroom instruction. Alignment of National Board for Professional Teaching Standards with personal instructional practices questioned and studied.

# Department of Engineering Technology and Industrial Studies 

Walter Boles, Chair<br>Voorhies Industrial Studies Complex 143

The Department of Engineering Technology and Industrial Studies offers the Master of Science degree in Engineering Technology and Industrial Studies with thesis and nonthesis options and concentrations in Engineering Technology, Occupational Health and Safety, and Industrial Relations. Under the Engineering Technology concentration, the degree requires the student to select courses, as approved by the graduate advisor, that provide the student with a technical area of specialty. Currently, typical technical areas include manufacturing, environmental safety, computer integrated manufacturing, electronics, drafting and design, and quality control. Other technical areas can be designed to meet the student's individual needs, if approved by the graduate advisor. A minor in Industrial Studies is also available at the graduate level.

Normally, a satisfactory score on the Graduate Record Examination is required for admission to the master's program.

## Requirements for the <br> Master of Science Degree

## Thesis Option

Candidate must

1. have completed undergraduate prerequisites of at least 18 semester hours in engineering technology or equivalent coursework approved by the advisor.
2. complete at least 30 semester hours, with 21 semester hours at the 6000 level, to include ETIS 6620 and 6640 and 6 semester hours from the following courses: ETIS 6110, 6180, 6370; 6010 or 6040.
3. complete 6 semester hours of an approved research tool with grades of C or better on the undergraduate or graduate level. Typical research tools include statistics, computer science programming, or foreign language.
4. file a Candidacy Form with the Graduate Office after the completion of 12 graduate credits and prior to the completion of 24 credit hours to include ETIS 6620, 6 hours from ETIS 6020, 6110, 6180, 6370, and 3 hours
from any industrial studies independent study or advanced technical problems course.
5. successfully complete a written comprehensive examination (may be taken no more than twice).
6. complete a major of at least 18 hours.
7. elect whether or not to have a minor. A minor, if elected, must include a minimum of 12 semester hours.

The program may include a cognate of 6 hours in management and marketing, computer science, economics, psychology, or vocational-technical education.

## Nonthesis Option

Candidate must

1. have completed undergraduate prerequisites of at least 18 semester hours in industrial studies or equivalent coursework approved by the advisor.
2. complete at least 36 semester hours with at least 26 semester hours of 6000-level courses to include ETIS 6620 and 6510 or 6910 and 6 semester hours from the following courses: ETIS 6110, 6180, 6370; 6010, or 6040.
3. complete 6 semester hours of an approved research tool to include at least one course in statistics with grades of C or better on the undergraduate or graduate level. Typical research tools include statistics, computer science programming, or foreign language.
4. file a Candidacy Form with the Graduate Office after completion of 12 graduate credits.
5. successfully complete a written comprehensive examination (may be taken no more than twice).
6. complete a major of at least 18 hours.
7. elect whether or not to have a minor. A minor, if elected, must include a minimum of 12 semester hours.

The program may include a cognate of 6 hours in management and marketing, computer science, economics, psychology, or vocational-technical education.

## Concentration: Engineering Technology

Candidate must complete

1. requirements for the thesis or nonthesis option.
2. core, approved by the advisor, consisting of emphasizing in one of the following typical areas: environmental safety, computer integrated manufacturing, drafting and design, quality control.
3. minor/cognate and/or additional electives as approved by the advisor.

## Concentration: Industrial Relations

Candidate must complete

1. requirements for the thesis or nonthesis option.
2. core consisting of ET 5420; ETIS 6010, 6620, 6640 (thesis option) or 6910 (nonthesis); PSY 5320.
3. electives to be selected from ETIS 6020, 6040, 6110, 6910; ECON 6510.

## Concentration: Occupational Health and Safety

Candidate must complete

1. requirements for the thesis or nonthesis option.
2. core consisting of ETIS 6020, 6040, 6070, 6620, and 6640 (thesis option) or 6910 (nonthesis).
3. electives to be selected from SAFE 5320, 5350, 6410, 6450, 6470, 6920; EXSC 6650; ET 5420, 5440, 5450, 5970; ETIS 6010, 6110, 6510, 6920; PSY 5350.

## Courses in Engineering Technology and Industrial Studies [ETIS]

5490 Topics in Industrial Technology. One to six credits. Selected topics offered as required to meet class needs.

5700 Industrial Topics. One to six credits. Problems in any one of a variety of areas to meet class needs.

5790 Shop Problems. Three credits. Prerequisites: Completion of all undergraduate courses in a given area and permission of instructor. For the advanced student who wishes to work on a designated problem in a specific area. Independent work on a selected problem or project under the instructor's guidance.

5990 Introduction to Operations Research. Three credits. Problem solving in research and development involving operations research models, computer applications, and industrial problems.

6010 Safety Planning. Three credits. Advanced study of planning in occupational safety and health management, including program planning and development methods and techniques as well as various systems approaches to hazard control.

6020 Safety Technology and Engineering. Three credits. Advanced study of the technical components of occupational workplace hazards, hazards analysis, workplace design, current regulatory requirements, engineering techniques for hazard control, personal protective systems, equipment and techniques. Includes a practical application problem of hazard analysis and control.

6040 Occupational and Environmental Hygiene. Three credits. Prerequisite: ET 4450/5450. An advanced quantitative study of occupational and environmental health principles, practices, and sampling techniques as required by either consensus or regulatory standards and their specific protocols to protect both workers and the public.

6070 Anthropometric Factors in Accident Prevention. Three credits. The necessity and desirability of a thorough consideration of anthropometric factors when designing facilities and equipment and recognition of those factors most prevalent in accidents.

6110 Designing for Economical Production. Three credits. Factors determining the acceptability of a product from a producibility point of view. Includes an analysis of function and cost, relative machining cost, material cost, manufacturing method, cost of tolerances, and surface finishes for the selected manufacturing methods.

6180 Seminar in Industrial Quality Developments. Three credits. Review of current quality control practices. Investigation of new concepts and literature in the discipline. Examinations of vendor/customer relationships in quality.

6230 Advanced Technical Drafting. Three credits. Current trends and techniques such as using computers to solve design problems
and the use of group suggestions (brainstorming) in solving design problems.

6240 Advanced Technical Problems in Metal. Three credits. In-depth insight into the use of metal in industry. Emphasis on industrial research and development techniques and their application in industry.

6260 Advanced Technical Problems in Electricity/Electronics. Three credits. In-depth insight into the practical applications of electronic theory. Students required to design and develop electri$\mathrm{cal} /$ electronic applications of an advanced nature.

6370 Computer-Integrated Design and Manufacturing. Three credits. Prerequisite: ET 4590/5590 or consent of instructor. Applications of computer-integrated manufacturing. Current techniques of design for manufacturing and the integration into information flow, organization, product design, and software applications.

6510/ 6520 Problems in Industrial Studies. Three credits each. Independent investigation and report of current problems of particular interest to individual students directed by department faculty members.

6620 Methods of Research. Three credits. Introduces Master of Science students to scholarly research principles and to thesis formats for research reporting. A problem is researched and written up in thesis proposal format.

6640 Thesis Research. One to six credits. Prerequisite: ETIS 6620. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

6710 Current and Future Trends in Engineering and Technology. Three credits. Prerequisite: Graduate standing. The latest advancements and practices in various engineering and technology fields. Selected topics may include computers and electronics, networking and telecommunication, instrumentation, lasers, automation and robotics, manufacturing and rapid prototyping, bioengineering and biotechnology, and renewable energy sources. Takes a student-centered, hands-on learning approach and focuses on understanding new technologies and how technology is used in the industry. Research projects will provide appropriate experience and accommodate individual's interest.

6910/ 6920 Problems in Engineering Technology. Three credits each. Independent investigation and report of a problem in engineering technology. Designed to meet the particular needs of the students; pursued under the direction of a department faculty member.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. Student must contact graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Courses in Engineering Technology [ET]

5220 Advanced Metalwork. Four credits. Techniques, equipment and procedures, advantages and disadvantages of current metal-casting processes used in industry. Laboratory exercises in sand molding and casting, the full mold process, investment casting, and permanent mold casting including pattern design and con-
struction, mold making, metal melting and handling. Guest lecturer(s). Plant tour(s).

5230 Advanced Machine Tool Technology. Three credits. Taper turning, boring and thread chasing, and calculations of screw threads and other operations. Gear terminology and calculations, practice gear cutting on the milling machine, use of index head.

5280 Computer-Aided Manufacturing: Numerical Control (NC). Four credits. Role of NC in today's manufacturing environment; machines and machine control systems of a typical installation; justification. Emphasis on writing and debugging programs for a three-axis milling machine and a two-axis turning machine utilizing CNC and computer-aided part programming. For those with little or no experience with NC or those seeking to broaden their knowledge of NC .

5330 Advanced Computer-Aided Drafting. Four credits. Prerequisite: ET 5360 or CM 5320. Interactive computer drafting and design using advanced AutoCAD software and add-ons. Primarily for students who want to increase their capabilities using CAD software and hardware.

5340 Design of Machine Elements. Three credits. Analytical design methods of machine elements. Stress analysis, working stress, combined stresses, failure theories, fatigue failure. Design techniques for shafts, fasteners, gears, bearings, and belt and chain drives. Includes a design project. Lecture.

5360 Computer-Assisted Drafting/Design II. Three credits. Prerequisites: ET 2310 or CM 3320. Utilizes MS-DOS computer and AutoCAD software to develop skills in the creation and analysis of mechanical and architectural solid models for design and production purposes. Includes the use of shading and rendering to enhance three-dimensional model display and the extraction of two-dimensional engineering drawings.

5370 Tool Design. Three credits. Design of tools, fixtures, gauges, and dies. Translates product drawing specifications to tooling concepts. Utilizes computer drafting.

5420 Industrial Safety. Three credits. Safety and health problems in the manufacturing, construction, and utilities industries, including pertinent laws, codes, regulations, standards, and liability considerations. Organizational and administrative principles and practices for safety engineering, accident investigation and recording, safety education, and safety enforcement.

5440 Fire Safety. Three credits. Possible prevention activities, fire hazards and their causes, and fire inspection techniques.

5450 Industrial Hygiene. Three credits. Safety and health education training and investigation activities and how they are related to overall environmental safety.

5590 Manufacturing Automation Systems. Three credits. Provides technical, human, and business aspects of modern automation systems. Includes automation controls, levels of control and major components/subsystems, object-based software components, intelligent actuators and sensors, emerging trends, flexible manufacturing systems (FMS), computer integrated manufacturing (CIM), industrial systems and supply chain applications, organizational approaches, and automation justification.

5600 Programmable Logic Controllers. Two credits. Introduces programmable logic controllers (PLCs). Selection, operation, and troubleshooting. Ladder diagrams and programming of PLCs emphasized.

5610 Instrumentation and Controls. Three credits. Devices and techniques used in the measurement of physical parameters. Consideration of accurates and sources of error, identification of typical measurements, sensors and transducers, control stability, and response.

5630 Local Area Networks. Four credits. Foundation and experience to understand the design, implementation, and management strategies of local area networks (LAN). Data communications standards and protocol fundamentals included. Lecture, laboratory activities, and a LAN design requirement.

5640 Industrial Electricity. Three credits. AC power theory and circuits for industrial applications, polyphase systems, power factor correction, and transformers. Theory, applications, and selection of motors and generators. Control subsystems with emphasis on power electronics.

5650 Introduction to Microprocessors. Three credits. Prerequisite: ET 3620. Introductory course in microprocessor-based systems and their related components. Machine language programming extensively used to solve problems and to demonstrate the relationship of the microprocessor to its supporting peripherals. Basic microcomputer architecture also emphasized.

5660 Microprocessor Interfacing. Four credits. Analog and digital conversion devices and their related systems. Introduction to individual subsystems; $A / D$ and $D / A$ data conversion. Organization and design of individual digital systems emphasized. Includes data transfer, conversion, storage, input and output with principal focus on systems external to computer systems.

5670 Microprocessor Design. Three credits. Advanced course in design and application of microprocessor-based microcomputers for measurement and control systems. In-depth analysis of software and hardware in the design process. Design, develop, and test an operating system for a microprocessor-based computer.

5680 Electronic Fabrication. Four credits. Prerequisite: ET 3610 or equivalent. Planning and designing electronic packaging, including printed circuit board design, component selection criteria, and construction techniques. Conventional and computer-aided printed circuit board design techniques used.

5690 Electronic System Analysis. Four credits. Theory of electronic troubleshooting and proper repair techniques of electronic devices.

5700 Transform Circuit Analysis. Three credits. Prerequisites: ET 3601 and MATH 1910 or permission of instructor. An advanced course in network analysis that stresses network theorems and solutions of time and frequency-domain problems with the use of Laplace Transforms.

5710 Industrial Seminar. One credit. Orientation to industrial job opportunities, placement practices, interview techniques, and preparation of application materials (resume, cover letter). Guest lectures, films, and student and faculty presentations.

5850 Fluid Power. Three credits. Systems and the basic components that make up these systems, including hydraulic, pneumatic, and fluidic. Emphasis on understanding the language and graphic symbols associated with fluid power and the performance characteristics of system components. Lecture, laboratory, and problem solving.

5860 Robotics. Three credits. Introduces the fundamentals of robots. Types of robots and controls, the prime movers, and the application of robots in the industrial environment.

5900 Productivity Strategies. Three credits. Analysis, design, and implementation of productivity strategies and improvement programs for a wide variety of organizations. Touches a wide spectrum of disciplines such as work design, quality, design engineering, and employee involvement.

5910 Maintenance Management. Three credits. Overview of the management of maintenance in organizations such as manufacturing operations, hospitals, or large maintenance shops. Application of work measurement, labor utilization, preventative maintenance, and computer applications.

5920 Plant Layout and Materials Handling. Three credits. An overview of facility planning including equipment selection, work flow analysis, activity relationship analysis, and plant layout for product, process, and JIT requirements. Teams assigned actual projects in industry. CAD layout presentations to industry management required.

5970 Engineering Economy. Three credits. Development of capital budgets; justification of capital projects using time value of money concepts; replacement analysis. Review of justification of actual capital projects and computer applications.

5980 Federal and State Safety Legislation. Three credits. The federal Occupational Safety and Health Act (OSHA) and the Tennessee Occupational Safety and Health Act (TOSHA); Environmental Protection Agency; rules and regulations and how they apply to industry.

5990 Industrial Engineering Systems. Three credits. Prerequisite: ET 3910 or equivalent. System design of work tasks including establishing time standards by time and motion study and work sampling; ergonomic design for integration of the human into the work task environment. Scientific methods supplemented by quality considerations with emphasis on statistical quality control (SQC). Computer software used for design and analyses. Graduate students will lead an industry design project team of students.

## Course in Concrete Industry Management [CIM]

5800 Special Problems in Concrete Industry Management. Onethree credits. Prerequisite: Permission of department. Opportunity to pursue projects of individual interest in concrete industry management. Projects may be technical and/or managerial in nature and may require any combination of literature reviews, lab work, field studies, and other research methods. A faculty member will approve a formally submitted proposal for the study, supervise progress, and grade a report and a presentation which are required upon completion of the project. May be repeated. No more than 6 hours may count toward degree.

## Course in Construction Management [CM]

5320 Architectural Computer-Aided Drafting and Design. Four credits. Using computers to draw and design residential architectural plans. Specifically geared toward the construction area of concentration.

## Courses in Industrial Education [IED]

5000 Program Development and Modification for the Special Needs Learner. Three credits. Basic strategies for identifying and working with special needs learners in industrial education.

5010 History and Philosophy of Industrial Education. Three credits. Relation to the development of industrial education stressed.

5030 Course Development in Occupational and Technology Education. Three credits. Basic techniques including occupational analysis, preparing objectives, planning a learning sequence, preparing learning activities, selecting and preparing learning resources, and evaluating student performance.

5040 Methods of Teaching Occupational and Technology Education. Three credits. Understanding and skills required for individualizing instruction in industrial arts and trade and industrial education.

5060 Organization and Operation of Occupational Student Organizations. Three credits. Orientation to incorporating occupational education programs. Emphasis on establishing an organization, planning chapter activities, utilizing community resources, chapter business procedures, and competitive activities.

5070 Laboratory Organization and Classroom Management. Three credits. Laboratory planning and layout, purchasing supplies and equipment, inventory and record keeping, laboratory maintenance, class organization, and safety.

5480 Topics in Industrial Education. One to six credits. Selected topics offered as required to meet class needs.

## Courses in Environmental Science and Technology [EST]

5770 Pollution Control Technology. Four credits. Introduces air, noise, solid waste, and water pollution control technology. Legislative regulations and equality standards, pollution types and sources, detection and analysis instruments, and treatment principles and practices.

5780 Air, Solids, and Noise Pollution Technology. Four credits. Prerequisites: 8 hours each chemistry, biology, and physics or permission of instructor. Introduces air, noise, solid, and hazardous waste pollution technology, including legislative regulations and quality standards: sources, detection, and analysis instrumentation and practices, and treatment and abatement principles, equipment, and practices.

5810 Energy and the Environment. Three credits. Introduces sources and methods of energy production and classifications of energy usages with emphasis on usage trends, energy conservation strategies, and alternate energy utilization.

5820 Solar Building Design. Three credits. Introduces environmental and economic impact of solar energy for residential and light industrial construction including topics such as day lighting, passive solar design, and hot water heating.

5840 Energy Auditing. Three credits. Introduces types of energy consumption and classifications of energy usages. Emphasis on conservation strategies and total management for residential and industrial plants.

5870 Passive Solar Design. Three credits. Introduces passive solar techniques in the construction of residential and light industrial structures. Includes day lighting, passive solar design, methods, and system integration.

# Department of English 

William Connelly, Chair<br>Peck Hall 302

The Department of English offers the Master of Arts, the Doctor of Philosophy, and a minor at the graduate level.
Materials required for application include official transcripts certifying coursework from each college or university attended, three letters of recommendation, GRE scores (English subject test optional), and a 500-word statement of purpose outlining academic interests and professional goals. Admissions decisions will be made after reviewing all materials and determining the applicant's capacity, suitability, and preparation for graduate study. Students are selected from a pool of qualified applicants. Admission to graduate study is not automatic by meeting minimum admission requirements.

## Admissions Process

Application for Summer/Fall admission must be complete by April 1. Application for Spring admission must be complete by November 1. Those seeking teaching assistantships must apply by February 1 for the following Fall semester. All application materials should be sent directly to the Graduate College, other than the assistantship application, which should be sent directly to the director of graduate studies in the English Department.

## Requirements for the Master of Arts (5000 and 6000 level)

## Thesis Option

Candidate must

1. have earned at least 30 semester hours of undergraduate English.
2. fulfill a foreign language requirement in one of the following ways:
a. complete 18 undergraduate semester hours of a foreign language or complete 6 semester hours of 3000 -level work in a foreign language,
b. earn a final grade of A or B in a foreign language course numbered 5990,
c. pass a reading examination administered by the Foreign Languages and Literatures Department;
d. earn a final grade of B or better in both ENGL 6010 (Old English) and 6020 (Beowulf), which must be taken sequentially.
3. either
a. complete 30 semester hours in English, including ENGL 6640 and 6660 with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate courses, or
b. elect a minor, in which the student takes a minimum of 12 semester hours, plus a minimum of 18 hours in English including ENGL 6640 and 6660.
4. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
5. successfully complete and defend a thesis.

## Nonthesis Option

Candidate must

1. have earned at least 30 semester hours of undergraduate English.
2. fulfill a foreign language requirement in one of the following ways:
a. complete 18 undergraduate semester hours of a foreign language or complete 6 semester hours of 3000 -level work in a foreign language,
b. earn a final grade of $A$ or $B$ in a foreign language course numbered 5990,
c. pass a reading examination administered by the Foreign Languages and Literatures Department;
d. earn a final grade of B or better in both ENGL 6010 (Old English Language and Literature) and 6020 (Beowulf), which must be taken sequentially.
3. either
a. complete 36 semester hours in English with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate courses; or
b. elect a minor, in which the student takes a minimum of 12 semester hours, plus a minimum of 24 hours in English, including ENGL 6660.
4. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
5. successfully complete a written examination in a selected area of concentration (the examination may be taken no more than twice).

## Requirements for the Doctor of Philosophy (6000 and 7000 level)

Candidates will be expected to have completed at least 30 semester hours of English at the undergraduate level. Applicants with an M.A. will be expected to have completed at least 20 hours of graduate coursework in English.
All Ph.D. candidates must have completed the following course of study:

1. ENGL 6660/7660 Introduction to Graduate Study: Bibliography and Research at either the M.A. or Ph.D. level.
2. Any ONE of the following: ENGL 7350 Critics and Criticism; 7380 Modern Critical Theory; 7470 Studies in Narratology; or 7520 Essentials of Linguistics.
3. Two courses from each of these groups (in each group one must be at the 7000 level).
a. British Literature through the Renaissance. ENGL 7010 Old English Language and Literature; 7020 Beowulf; 7030 Chaucer Seminar; 7040 Medieval English Literature; 7050 Studies in Early English Drama, Excluding Shakespeare: 9001642; 7110 Spenser Seminar; 7120 Studies in SixteenthCentury Prose and Poetry; 7130 Studies in Seventeenth-Century Prose and Poetry; 7140 Studies in Milton; 7150 Studies in Shakespeare. Other courses (7230 Major British Writers, 7500 Selected Topics in Literature and Language, 7620 Directed Reading and Research) when appropriate.
b. British Literature since the Renaissance. ENGL 7200 Studies in Restoration and Eighteenth-Century Literature; 7210 Studies in English Romanticism: Wordsworth and Coleridge; 7220 Studies in English Romanticism: Shelley, Byron, and Keats; 7270 Studies in Victorian Literature; 7290 Modern British Literature. Other courses (ENGL 7230 Major British Writers, 7490 Studies in the Novel, 7500 Selected Topics in Literature and Language, 7620 Directed Reading and Research) when appropriate.
c. American Literature: ENGL 7340 African American Literature; 7360 Studies in Southern Literature; 7400 American Literature to 1800; 7410 Studies in American Literature: 1800-1860; 7420 Studies in American Literature: 18601910; 7430 Studies in American Literature: 1910-1950; 7480 Studies in Contemporary Literature. Other courses (ENGL 7330 Major American Writers; 7490 Studies in the Novel; 7500 Selected Topics in Literature and Language; 7620 Directed Reading and Research) when appropriate.
4. A sufficient number of electives chosen from the above courses or any other English graduate courses to complete the required number of hours.
5. Language requirement: Reading knowledge of one foreign language. (Committees may require more than one language.) The language requirement must be fulfilled in one of the following ways:
a. completing 18 undergraduate semester hours of a foreign language or 6 semester hours of 3000 -level work in a foreign language;
b. earning a final grade of A or B in a foreign language course numbered 5990;
c. passing a reading examination administered by the Foreign Languages and Literatures Department;
d. meeting this requirement at the M.A. level.
6. A Candidacy Form must be filed with the Graduate Office prior to the completion of $\mathbf{3 0}$ credit hours along with notice of the composition of the candidate's doctoral committee.
7. Upon the completion of coursework, students must successfully complete three written Ph.D. exams in chosen concentrations from among the following areas: Old and Middle English; Renaissance Literature; Restoration and Eighteenth-Century Literature; British Romanticism; British Victorian Literature; Twentieth-Century British Literature; Nineteenth-Century American Literature; Twenti-eth-Century American Literature; Rhetoric, Composition, and Pedagogy; and Critical Theory. An oral exam will be given upon the successful completion of the three written exams. (NOTE: Other exams may be added soon.)
8. Completion of dissertation ( 12 hours minimum) and oral dissertation defense.

## Courses in English [ENGL]

5510 Modern English Grammar and Usage. Three credits. Historical development of the theory and practice of modern English grammar and usage.

5530 History of the English Language. Three credits. Traces the development of the English language from cuneiform writing systems and Semitic and Phoenician syllabaries through Greek and Latin contributions, Old and Middle English, and Modern English.

5540 Approaches to Teaching ESL Grammar and Writing. Three credits. Prerequisite: ENGL 4510/5510. A survey of the background and basic methods needed to teach English grammar and composition to students for whom English is a second language. Emphasizes understanding the problems nonnative speakers face and developing techniques for helping nonnative speakers express themselves in written English.

6000/ 7000 Poetry Workshop. Three credits. A rigorous writing course to develop the advanced writer's use of point-of-view, tone, rhythm, meter, line, and stanza. Practice in both the spontaneity of composition and the deliberate, disciplined work of revision. Examination, through poems and essays by relevant authors, of the movements, forms, and possibilities of contemporary poetry.

6010/ 7010 Old English Language and Literature. Three credits. Prerequisite for ENGL 6020/7020, Beowulf. Introduction to Old English language (grammar, phonology, syntax, and vocabulary) and literature (poetry and prose) and to the historical and cultural background of the Anglo-Saxon period.


6020/ 7020 Beowulf. Three credits. Prerequisite: ENGL 6010/7010. Intensive line-by-line study of Beowulf in Old English, with special emphasis on its sources and analogues, twentieth-century criticism, and current dating studies of the poem.

6030/7030 Chaucer Seminar. Three credits.
6040/7040 Medieval English Literature. Three credits. A study of Middle English literary types (in poetry, prose, and drama) and of the major authors and texts of the Middle English period. Includes study of Middle English dialects.

6050/ 7050 Studies in Early English Drama, Excluding Shakespeare: 900-1642. Three credits. The origin and development of English drama, emphasizing Elizabethan and Jacobean drama and the contributions of Shakespeare's contemporaries and successors.

6110/7110 Spenser Seminar. Three credits.
6120/7120 Studies in Sixteenth-Century English Prose and Poetry. Three credits.

6130/7130 Studies in Seventeenth-Century English Prose and Poetry. Three credits. Selected nondramatic literature of the century, with primary emphasis on the seventeenth century before the Restoration. Included are Donne, Herbert, and the metaphysical poets and Jonson and the Cavalier poets.

6140/ 7140 Studies in Milton. Three credits. The major poetry of John Milton, including Lycidas, Paradise Lost, Samson Agonistes, and Paradise Regained.

6150/7150 Studies in Shakespeare. Three credits. Shakespeare's poems and plays, emphasizing poetic and dramatic techniques in Shakespeare's works and critical reaction to those works.

6200/7200 Studies in Restoration and Eighteenth-Century Literature. Three credits. Designed to give students a definite critical knowledge of the major literary works of Restoration and eighteenthcentury England, 1660-1800. Course may focus on either drama, poetry, or prose or a combination.

6210/ 7210 Studies in English Romanticism: Wordsworth and Coleridge. Three credits.

6220/ 7220 Studies in English Romanticism: Shelley, Byron, and Keats. Three credits.

6230/ 7230 Major British Writers. Three credits. An in-depth study of one, two, or three British writers. Course varies according to interests of instructor and students.

6270/ 7270 Studies in Victorian Literature. Three credits. Intellectual backgrounds of the Victorian period; major prose writers: Macaulay, Carlyle, Newman, Mill, Ruskin, Arnold, Pater; major poets: Tennyson, Browning, Arnold.

6290/ 7290 Modern British Literature. Three credits. Intellectual backgrounds of modern British literature; major novelists: Forster, Woolf, Joyce, Lawrence; major poets: Yeats, Eliot, Auden, Thomas; selected minor writers.

6300/ 7300 History of Children's Literature. Three credits. History of British and American literature for children and analysis of issues in the field.

6305/ 7305 Special Topics in Children's/Adolescent Literature. Three credits. Selected genre, period, ethnicity, tradition, or literary
focus on children's and/or young adult literature. Subject will vary with instructor.

6310/7310 Studies in Popular Culture. Three credits. Theory and history of popular culture with notable examples from the past and present.

6320/ 7320 Postcolonial Literature and Theory. Three credits. Introduces postcolonial studies through an exploration of seminal literary and critical writings in the field. Primary focus on the critical thought and discursive practices that define postcolonial discourse and their application to literature that engages issues of colonialism, its aftermath, and other forms of imperialism.

6330/ 7330 Major American Writers. Three credits. An in-depth study of two or three American writers. Course varies according to interests of instructor and students.

6340/ 7340 African American Literature. Three credits. An in-depth study of the African American literary tradition with emphasis on significant authors, genres, texts, and contexts.

6350/ 7350 Critics and Criticism. Three credits. Examines significant critical movements in Western literature from classical times into the twentieth century. Focusing on major critics such as Aristotle, Johnson, Coleridge, and Eliot, the course also treats less influential figures and considers practical applications of theory to specific texts.

6360/7360 Studies in Southern Literature. Three credits. Themes, theories, movements, and types of literature produced in the American South with particular emphasis on selected authors and texts.

6370/7370 Satire. Three credits. Satire as a distinct genre, emphasizing its continuity in Western literature from its roots among the Greeks to its resurgence in the twentieth century; representative works from four periods: ancient, medieval and Renaissance, eighteenth century, and modern; prose, poetry, and drama.

6380/ 7380 Modern Critical Theory. Three credits. Covers major critical trends in literary theory since 1965, including feminist, Marxist, structuralist, and deconstructive approaches to literature. Students explore background and implications of these theories and analyze selected works of literature in light of these approaches.

6390/ 7390 Reading Postmodernism. Three credits. Theoretical discourse which works to define the cultural mindset known as "postmodernism." Theories examined will be applied to examples of postmodern literature, film, and/or television. Topics emphasized include the instability of social and cultural categories, the dissolving boundaries between "high" and "low" culture and art, and the subversion of realist narrative strategies.

6400/ 7400 American Literature to 1800. Three credits.
6410/ 7410 Studies in American Literature: 1800-1860. Three credits.
6420/ 7420 Studies in American Literature: 1860-1910. Three credits.
6430/ 7430 Studies in American Literature: 1910-1950. Three credits.
6440/ 7440 Popular Literature of the Twentieth Century. Three credits. The forms of literature reflecting the mass culture of America from 1900 to the present, including such genres as the mystery, the western, science fiction and fantasy, popular humor, comic strips, popular poetry, song lyrics, and the aesthetics of nonprint media.

6450/ 7450 Contemporary Women's Literature. Three credits. Study of recent women writers with emphasis on the relationship between literature and the social and political status of women. Addresses diverse writers and issues of difference among women, including race, class, ethnicity, nationality, sexuality, and other determinants of individual and group identity.

6460/ 7460 Studies in Contemporary Drama. Three credits. The development of world drama from 1950 to the present with attention to related criticism and theory.

6470/ 7470 Studies in Narratology. Three credits. Examines modern and contemporary theories of narrative (modernist, rhetorical structuralist, dialogical) with particular application to selected authors and texts.

6480/ 7480 Studies in Contemporary Literature. Three credits. Intellectual backgrounds of contemporary literature; significant developments in fiction, nonfictional prose, poetry, and drama.

6490/ 7490 Studies in the Novel. Three credits. The novel as a literary genre may be approached from a variety of perspectives, including generic, historical, theoretical, or single-author approaches. Course varies according to interests of instructor and students.

6500/ 7500 Selected Topics in Literature and Language. Three credits. A specialized field of literary or linguistic inquiry, its bibliography, critical problems, and probable solutions. Topics vary with the professor assigned to the course.

6505/ 7305 History of Rhetoric: Classical to Renaissance. Three credits. Examines the major theorists and themes, including pedagogical implications, in rhetorical texts from ancient to modern times.

6510/ 7510 Modern Rhetoric and Prose Style. Three credits.
6520/ 7520 Essentials of Linguistics. Three credits. Major linguistic approaches to the study of language-dominant trends and current issues in linguistics; the phonological, morphological, and syntactic structure of the English language.

6550/ 7550 Writing Center Theory. Three credits. Examines the theoretical and practical components of writing center work, including collaborative, composition, learning, writing center, and postmodern theories. Open to all graduate students; required for all University Writing Center assistants.

6560/ 7560 Seminar in Teaching Composition. Three credits. Open only to first-year teaching assistants or with consent of instructor.

6570/ 7570 Practicum in Composition Methodology. Three credits. In-depth study of how composition theory and research inform methodology. Topics covered vary according to interests of instructor and students.

6580/ 7580 Computers and Writing. Three credits. Practical and theoretical implications of computer technology and of the Internet and World Wide Web for the teaching of writing.

6590/ 7590 Seminar in Teaching of Literature. Three credits. Recommended for second-year teaching assistants and others interested in teaching literature.

6620/ 7620 Directed Reading and Research. Three credits. Prerequisite: Permission of the director of graduate studies. Individually supervised reading and research either in a historical period of English or American literature or in a major literary genre.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6650/ 7650 Special Topics in Popular Culture. Three credits. A theme, genre, period, text, or artist in one or more popular cultural media. Subject will vary each time course is taught.

6660/ 7660 Introduction to Graduate Study: Bibliography and Research. Three credits. Literary scholarship: its nature and scope; traditional and modern methods; the definition and solution of research problems; the production of literary scholarship. Required of all Master's students enrolling in English.

6650/ 7650 Special Topics in Popular Culture. Three credits. A theme, genre, period, text, or artist in one of more popular cultural media. Subject will vary each time course is taught.

6700/ 7700 Studies in Folklore. Three credits. Study of folklore with focus on the history of the discipline.

6710/ 7710 Special Topics in Folklore. Three credits. Selected area of folklore: folk narrative, folklore and literature, folk song, folk religion, proverb, or folklore of a particular group.

6750/ 7750 Film Studies. Three credits. Covers such topics as the film text, adaptation, narratology, genres, ideology, authorship, theory, history, schools, movements, national cinemas, and film audiences.

6760/ 7760 Special Topics in Film Studies. Three credits. Examines a theme, genre, director, period, school or movement, national cinema, etc. Subject will vary each time course is taught.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7600/ 7610 Internship. Three credits each.
7640 Dissertation Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled, student should register for at least one credit hour of doctoral research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

# Department of Foreign Languages and Literatures 

Deborah Mistron, Chair<br>Boutwell Dramatic Arts Building 301

The Department of Foreign Languages and Literatures offers the Master of Arts in Teaching with concentrations in either French, German, or Spanish. Also offered is a minor at the graduate level. Students who would like to minor in foreign languages should determine the requirements based on their major curriculum in consultation with their advisors.

The Graduate Record Examination (GRE) is required. A combined score of 800 on the verbal and either quantitative or analytical portions of the Graduate Record Examination is considered indicative of potential for an acceptable level of academic performance.

## Requirements for the Master of Arts in Teaching-Foreign Languages Major (5000 and 6000 level)

This degree is intended to prepare native and nonnative speakers of the foreign language for a career in foreign language teaching on the elementary or secondary level. Students planning to teach in elementary school must be licensed prior to admission to the M.A.T. program. Those planning to teach on the secondary level may be already licensed or may pursue licensure while enrolled in the M.A.T. program; however, requirements for admission to teacher education must be met. Students select a concentration from French, German, or Spanish.

## Candidate must

1. have earned at least 24 semester hours of the language selected for admission to the program. Students may complete up to 6 hours of these undergraduate hours while concurrently enrolled in the graduate program. Native speakers must consult with the graduate director regarding this requirement.
2. complete a minimum of 33 semester hours including 21 hours in foreign language courses as listed below OR 18 hours in foreign languages and ENGL 6520, Essentials of Linguistics; no more than 30 percent of the total degree hours dual-listed as undergraduate/graduate hours can be counted toward the degree.
3. complete a professional education component approved by the chair of the Educational Leadership Department.
4. achieve an oral proficiency level in the target language of at least "Advanced" and a written proficiency level of
"Advanced Plus" on the ACTFL scale; students should consult the foreign languages graduate director for additional information on this requirement.
5. demonstrate a basic reading knowledge in a language other than the target language; this requirement may be met by passing a foreign language reading examination or by earning a final grade of A or B in French or German 4990.
6. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
7. successfully complete a written comprehensive examination that covers language teaching methods and the language, literature, and culture of the target language (may be taken no more than twice).

## Choices Under the M.A.T. in Foreign Languages

Candidates for the M.A.T. with a major in Foreign Languages and a concentration in either French, German, or Spanish may choose whether or not to seek licensure to teach. The curriculum selected is based on the individual's preference and need:

1. for those already licensed to teach in the state of Tennessee;
2. for those who seek licensure in conjunction with the M.A.T. degree;
3. for those who wish to pursue the degree without teacher licensure in Tennessee.
The foreign language requirement under each option is the same; candidates should consult an advisor in the Educational Leadership Department regarding the courses pertinent to their degree and career goals.

## Required courses in foreign languages:

F L 6010 Foreign Language Acquisition: Theory and Practice, 3 hours (taught in English)
French, German, or Spanish 6000 seminar, 3 hours
F L 6700 or ENGL 6520, 3 hours
6 hours of electives in 5000- or 6000-level courses in the concentration selected
6 hours selected from the following:
F L 69906 hours of internship abroad OR
F L 69903 hours of local internship AND
F L 6800 Instructional Technology in Foreign Language Education OR
F L 6900 Issues in Foreign Language Acquisition

## Courses in Foreign Languages [F L]

5550 Introduction to Teaching Foreign Language. Three credits. Introduces students to a variety of approaches and methods for foreign language instruction in elementary or secondary schools.

6010 Foreign Language Acquisition: Theory and Practice. Three credits. Acquaints students with major theories of foreign language acquisition and various approaches to language learning.

6020 Reading, Writing, and Learning Methods for ESL. Three credits. (Same as YOED 6020.) Provides teaching ideas for promoting oral, reading, and writing development in English for K-12 English learners. Language acquisition theory, classroom organization, teaching strategies, and assessment procedures for effective English learner instruction.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled for thesis research, students should register for at least one credit hour of research each semester until the thesis is completed. $\mathrm{S} / \mathrm{U}$ grading.

6700 Introduction to Linguistics. Three credits. Basic concepts of linguistic analysis, which are applied to linguistic phenomena in French, German, Spanish, and English.

6750 Romance Linguistics. Three credits. Prerequisite: F L 6700, ENGL 6520, or permission of instructor. Introduces linguistic heritage of Latin as manifested in modern Spanish, French, Italian, Portuguese, Catalan, Sardinian, and Rumanian. Earlier language stages as well as mechanisms of language evolution also examined. Knowledge of one Romance language helpful but not required.

6800 Instructional Technology in Foreign Language Education. Three credits. An introductory course with an emphasis on telecommunication and computer applications. Critical examination and evaluation of existing technologies and programs.

6900 Issues in Foreign Language Acquisition. One, two, or three credits. (May be repeated for a maximum of 9 credits.) Prerequisite: Approval of graduate coordinator. Independent study to address a problem or investigate an issue agreed upon by both student and instructor.

6990 Internship. Three or six credits. Prerequisite: F L 6010. Three credits are given for a supervised teaching internship at MTSU; six credits are given for a teaching internship abroad. Under certain circumstances a self-designed, nonteaching internship may be undertaken locally or in a foreign country where the target language is spoken. Students should consult the graduate director in Foreign Languages and Literatures for details.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

## Courses in French [FREN]

5010 Topics in Twentieth-Century French Literature. Three credits. Prerequisite: 6 hours of French beyond the intermediate level or permission of the instructor. Repeatable up to six hours.

5020 Topics in French Film. Three credits.
5030 Topics in Nineteenth-Century French Literature. Three credits. Prerequisite: 6 hours of French beyond the intermediate level or permission of the instructor. Repeatable up to six hours.

5040 Topics in Eighteenth-Century French Literature and Culture. Three credits. Prerequisite: 6 hours of French beyond the intermediate level or permission of the instructor.

5050 Topics in Medieval and Renaissance French Literature. Three credits. Prerequisite: 6 hours of French beyond the intermediate level or permission of the instructor. Repeatable up to six hours.

5060 Topics in Neoclassical French Literature. Three credits. Prerequisite: 6 hours of French beyond the intermediate level or permission of the instructor. Repeatable up to six hours.

5900 Directed Study in French Literature and Culture. One to six credits. Prerequisite: 6 hours of French beyond the intermediate level or permission of the instructor. Individualized intensive reading in primary and secondary sources relating to a specific topic in French literature or culture. Arrangements must be made with instructor prior to registration.

5990 Techniques in Translation. Three credits. Prerequisites: Admission to the College of Graduate Studies or permission of the instructor. For graduate students seeking proficiency in reading French for research purposes. Open to undergraduates seeking to prepare for graduate study. Will not count toward a major or minor in French.

6000 Seminar in French Studies. Three credits. Prerequisite: Permission of instructor. Comprehensive study of history and structure of French language; advanced stylistics leading to research project of cultural, literary, or linguistic topic.

6970 Seminar in French Literature. Three credits. Prerequisites: 9 hours of French on the 4000/5000 level; must be of graduate status in the M.A. program or have permission of professor. An in-depth look at specific topics, themes, and/or authors in French literature from the medieval period to the present. May be taken twice.

## Courses in German [GERM]

5010- Topics in German Literature. Three credits each. Prerequisite: 50136 hours of German beyond intermediate level or permission of instructor.
5010 The Art of E. T. A. Hoffmann
5011 The Bourgeois Novel (Keller, Raabe)
5012 The Prose Fiction of Thomas Mann
5013 The Prose Fiction of Hermann Hesse and Franz Kafka

5020 German Literature: 1725-1880. Three credits. Prerequisite: 6 hours of German beyond intermediate level or permission of instructor.

5030 German Literature: $\mathbf{1 8 8 0}$ to present. Three credits. Prerequisite: 6 hours of German beyond intermediate level or permission of instructor.

5900 Directed Study in German Literature and Culture. One to six credits. Prerequisite: 15 hours of German or permission of instructor. Individualized intensive reading in primary and secondary sources relating to a specific topic in German literature or culture. Arrangements must be made with instructor prior to registration.

5990 Techniques in Translation. Three credits. Prerequisites: Admission to the College of Graduate Studies or permission of the instructor. For graduate students seeking proficiency in reading German for research purposes. Open to undergraduates seeking to prepare for graduate study. Will not count toward a major or minor in German.

6000 Seminar in German Studies. Three credits. Prerequisite: Permission of instructor. Comprehensive study of history and structure of German language; advanced stylistics leading to research project of cultural, literary, or linguistic topic.

6970 Seminar in German Literature. Three credits. Prerequisites: 9 hours of German at the 4000 level or higher or permission of instructor; graduate status in the M.A. or M.A.T. program. An indepth study of an author, genre, period, or literary movement in German literature from 1850 to present. May be taken twice.

## Course in Humanities [HUM]

5550 The Grail Legend in Film and Literature. Three credits. Prerequisites: ENGL 2030 and either HUM 2610 or ENGL 2020 or permission of instructor. Explores the origin and development of the Grail legend in Western art primarily in literature and film.

## Courses in Spanish [SPAN]

5010 History of the Spanish Language. Three credits. Historical development of Spanish from Latin. Students also become familiar with the characteristics of Old Spanish.

5020 Spanish Literature I. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Spanish literature from its beginnings to 1700, emphasis on literary history, styles, and themes. Prose fiction and nonfiction, poetry, and drama included.

5030 Spanish Literature II. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Works from different genres which represent major literary movements from the eighteenth century to the present.

5040 Latin American Literature I. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Latin American literature from pre-Columbian times through Romanticism. Prose fiction and nonfiction, poetry, and drama included.

5045 Topics in Hispanic Cinema. Three credits. Prerequisite: SPAN 3020 or permission of instructor. A cultural study of the peoples and societies of Latin America and Spain through film.


5050 Latin American Literature II. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Major works of Latin American literature from the late nineteenth century to the present.

5060 Special Topics in Hispanic Studies. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Topics in language, culture, or literature.

5070 Special Topics in Spanish Literature or Culture. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Topics in peninsular Spanish literature or culture.

5090 Special Topics in Latin American Literature or Culture. Three credits. Prerequisite: 6 hours of Spanish beyond the intermediate level or permission of instructor. Topics in specialized areas of Latin American literature or culture vary.

5120 Spanish Phonetics and Pronunciation. Three credits. A practical introduction to phonetic principles involved in achieving native-sounding Spanish pronunciation, including sounds, stress, intonation, and smooth speech stylistics. Native Spanish speakers or students with native-like Spanish pronunciation may not take this course for credit without instructor permission.

## 5900 Directed Readings in Spanish Literature and Culture.

5910 Directed Readings in Latin American Literature and Culture. One to six credits. Prerequisite: 15 hours of Spanish or permission of instructor. Individualized intensive reading in primary and secondary sources relating to a specific topic in Spanish or Latin American literature or culture. Arrangements must be made with instructor prior to registration.

5920 Spanish for Reading Knowledge. Three credits. Prerequisite: Admission to College of Graduate Studies or permission of instructor. For graduate students seeking proficiency in reading Spanish for research purposes. Open to undergraduates seeking to prepare for graduate study. Will not count toward a major or minor in Spanish or the undergraduate foreign language requirement.

5990 Study Abroad. Three to twelve credits. Prerequisites: Enrollment in the Master of Arts in Teaching program or approval of the instructor. Students will spend at least four weeks in a Spanishspeaking country studying the Spanish language, literature, and culture. Credits may be earned in Murcia, Spain, or other study abroad programs approved by the Department of Foreign Languages and Literatures. Course may be used for elective credit for the Master of Arts in Teaching degree.

6000 Seminar in Spanish Studies. Three credits. Prerequisite: Permission of instructor. Comprehensive study of history and structure of Spanish language; advanced stylistics leading to research project of cultural, literary, or linguistic topic.

6970 Seminar in Hispanic Literature. Three credits. Prerequisite: 9 hours of Spanish at the 4000-5000 level or higher or permission of the instructor. An in-depth study of an author, genre, period, or literary movement in Peninsular or Latin American literature. May be taken twice.

## Department of Geosciences

Ronald L. Zawislak, Chair<br>Kirksey Old Main 325B

The Department of Geosciences offers a graduate certificate in Geoscience. The certificate program consists of 12-16 hours taken from a variety of geography and geology courses. The certificate in Geoscience should be of particular interest to those in the private sector, K12 and community college education, and government agencies. The department also offers a minor at the graduate level. Hours taken in the certificate program normally can be applied toward the minor.

The required courses for the graduate certificate in Geoscience are
GEOL 5060 Principles of Geoscience, 4 hours
One of the following:
GEOG 5530 Geographic Information Systems, 4 hours
GEOG 5490 Remote Sensing, 4 hours
Required courses total 6-8 hours credit. In addition to the required hours listed above, students will take 6-8 additional hours in geography and/or geology under the guidance of their academic advisors for a total of 12 to 16 hours to complete the graduate certificate in Geoscience.

## Courses in Geography [GEOG]

5280 Special Problems and Topics in Geography. One to six credits. Research participation or guided readings in a particular area or topic appropriate to the student's interests and professional objectives. The type and amount of additional work will be decided upon when student registers for the course.

5310 Resource Management and Conservation. Three credits. Current problems related to an intelligent use and management of our environmental resources. Additional projects, reports, and/ or papers.

5320 Economic Geography. Three credits. Relationship of the physical factors of the environment to the productive occupations of humans and the distribution of the products produced. Additional projects, reports, and/or papers.

5330 Political Geography. Three credits. Significance of geographical factors in understanding political relationships within and among nations; spatial implications of political decision-making processes. Additional projects, reports, and/or papers.

5340 Historical Geography. Three credits. Prerequisite: GEOG 2000 or permission of instructor. The changing human geography of the United States during four centuries of settlement and devel-
opment. Emphasis on changing population patterns as well as patterns of urban and rural settlement. Additional projects, reports, and/or papers.

5360 Cultural Geography. Three credits. Prerequisite: GEOG 2000 or permission of instructor. Description and explanation of spatial patterns and ecological relationships in human culture. Emphasis on "reading" the cultural landscapes. An in-depth field component will be required.

5370 Urban Geography. Three credits. An introduction to the development of towns, cities, and associated urban areas. Environmental problems also examined. Classroom analysis of various theories of urban development and of data collected by field work. Preparation of appropriate land-use map.

5380 Cartography. Four credits. General knowledge of the field including familiarity with the techniques and tools of professional cartography and graphics. Selected lectures and class discussions. A series of map construction assignments; a specialized map assignment supported by written analysis. Three hours lecture and one two-hour laboratory per week.

5401- Field Course. Four credits. Supervised study in some geographi-
5402 cal area, preceded by classroom preview and concluded by a time of evaluation. Emphasis on the natural and cultural elements of the environment, with special attention directed toward the pattern of human occupancy. An intensive period of study and research on a full-time basis. Work required will depend on area researched and time involved. Consult department chair for specific fees.

5410 Geography of the United States and Canada. Three credits. Natural, cultural, and geographic environment of these regions. Additional projects, reports, and/or papers.

5420 Geography of Latin America. Three credits. Geographic regions of Mexico, Central America, the West Indies, and South America. Policy analysis and supporting data.

5430 Geography of Europe. Three credits. General distribution of natural and cultural features of Europe followed by a detailed study of the regions and countries of the southern, central, and northwestern parts of the continent. Policy analysis of a Europeanoriented problem.

5460 Geography of the Former Soviet Union. Three credits. Analysis of the natural, cultural, and human use regions of the former Soviet Union. A policy analysis of an aspect of the region's geography is required.

5470 Rural Settlement. Three credits. Prerequisite: GEOG 2000 or permission of instructor. A geographical analysis of forms, structures, and distribution of rural settlements in distinctive parts of the earth based upon their origin, function, and development. Special emphasis given in analyzing rural settlements of middle Tennessee. Additional projects, reports, and/or papers.

5490 Remote Sensing. Four credits. Prerequisites: GEOG 1030 and 4380 (or 5380). Various vehicles of remote sensing such as radar, satellite imagery, and infrared data. Use of data in preparation of maps and applications to land use and environmental problems examined. Selection of data from either a numeric or image remote sensing system, interpreting, and developing a report from the interpretations. Three hours lecture and one two-hour laboratory per week.

5500 Geography of the Middle East. Three credits. An analysis of the problems, issues, and theories involved in understanding the physical, cultural, and regional geography of the area. Additional projects, reports, and/or papers.

5510 Laboratory Problems in Remote Sensing. Four credits. Computer processing of selected satellite imagery. Laboratory will provide practical experience through design, execution, and completion of applied remote sensing projects, one of which will be the effects of an environmental impact.

5520 Image Interpretation. Four credits. Principles, methods, and techniques of image interpretation including maps, satellite data, and aerial photos. Environmental impact of a special project. Three hours lecture and one two-hour laboratory per week.

5530 Geographic Information Systems. Four credits. Lecture and laboratory work relative to computer-manipulated geographic data base. Laboratory work will involve experience in practical application of a geographic information system (GIS) to prob-lem-solving. Student will take appropriate data and compile an environmental impact statement (EIS). Three hours lecture and two hours laboratory per week.


## Courses in Geology [GEOL]

5000 Petrology and Petrography. Four credits. Prerequisite: GEOL 3000. Igneous, sedimentary, and metamorphic rocks. Theories of formation and evolution based upon mineralogical and geochemical evidence. Examination and classification of rocks in hand sample and thin section. Additional assignments involving data analysis and interpretation and completion of a research paper required for graduate credit.

5020 Geomorphic Regions of the United States. Four credits. Prerequisite: GEOL 1030 or 1040. The origin, regional distribution, and geomorphic features and history of the landforms of the United States. Students required to analyze maps, structure sections, and aerial photography to determine geomorphic form and the forces and processes that produced these forms plus research a geomorphical problem resulting in a thesis-type paper. Three hours lecture and two hours laboratory per week.

5030 Invertebrate Micropaleontology. Four credits. Invertebrate and microscopic animal life of the past including recent preserved representatives and their ancient fossilized ancestors. Numerous field trips to local fossil-collecting sites. Designed to aid in the preparation of earth science teachers, geologists, and biologists. Research paper on a topic approved by instructor. An oral presentation of this material may be required. Three hours lecture and two hours laboratory per week.

5050 Meteorology. Three credits. Prerequisite: GEOL 1030 or 1040 or GEOG 1030 or consent of instructor. (PHYS 2010 or 2110 and CHEM 1110 recommended.) Physical laws as they relate to the atmosphere, atmospheric processes and their effects on air masses, fronts, and atmospheric circulation, the dynamics of the atmosphere and its relationship to the hydrosphere. Special problem to be assigned by the instructor.

5060 Principles of Geoscience. Four credits. Includes topics from geology, astronomy, meteorology, and oceanography. Specifically designed to aid in the preparation of earth science teachers in the public schools. Term paper on topic approved by the instructor. Three hours lecture and two hours laboratory per week.

5070 Sedimentation and Stratigraphy. Four credits. Prerequisites: GEOL 1030 or 1040, 1050, and 3000, or consent of instructor. Sedimentary rocks; the processes of sedimentation, the alteration of sediments through time, and an examination of the resulting stratigraphic units. For geoscience majors and those with interests in soil mechanics and civil engineering. Research paper on a topic approved by the instructor. An oral presentation may also be required. Three hours lecture and two hours laboratory per week.

5080 Structural Geology. Three credits. Prerequisites: Knowledge of trigonometry, GEOL 1030 or 1040, and 3040; GEOL 1050 recommended. Orientation and deformation of rock. Geometric, analytical, and statistical solutions to structural problems. Emphasis on three-dimensional visualization, problem solving, geological map interpretation, and the mechanics of deformation. Case analyzing, research, and interpretation required. Lecture and laboratory.

5090 Problems in Geology. One to six credits. Prerequisite: A minimum of 12 semester hours of geology, at least 6 hours of which must be upper division and excluding GEOL 1030 or by consent of instructor. An independent research-oriented project commensurate with the student's interests and qualifications. In-depth research requiring extensive and intensive search of applicable literature and large study area. An oral examination and discussion required. May be repeated up to a maximum of six hours.

5100 Geophysical Prospecting. Four credits. Prerequisites: GEOL 3060, MATH 1910, PHYS 2010 or 2110, or consent of instructor. PHYS 2020 or 2120 , GEOL 1030 or 1040, and MATH 1920 also recommended. Survey of seismic, gravimetric, and magnetic/electrical exploration methods. Applied course covering some elementary theory, basic field practice, computation fundamentals, interpretation techniques. Case analysis, research, and interpretation required. Two-hour lecture and two hours laboratory per week.

5120 Environmental Geology. Four credits. Prerequisite: GEOL 1030 or 1040 or GEOG 1030 or consent of instructor. Application of geologic information to minimize possible environmental degradation and maximize utilization of resources in the natural and modified environment, local examples and field trips. Topics include engineering properties of earth materials, natural hazard prediction and reduction, water supply, solid and hazardous wastes, mineral resources, global change, land-use planning, environmental impact analysis. Three hours lecture and two hours laboratory per week. An in-depth research project and paper required.

5130 Hydrogeology. Four credits. Prerequisites: GEOL 1030 or 1040 or consent of instructor. Basic processes and measurement of the hydrologic cycle, including precipitation, evaporation, surface runoff, stream flow, soil moisture, and ground water. Emphasis placed on ground water, including geology of occurrence, principles of flow, conceptual models of regional flow, chemistry and quality, well hydraulics, aquifer characteristics, resource development, detection of pollutants, and contaminant transport. Additional individual research project required, including a written and classroom report. Lecture and laboratory.

5140 Inorganic Geochemistry. Three credits. Prerequisites: CHEM 1120 and GEOL 1040. Principles of inorganic geochemistry. Geochemistry of the earth and solar system, isotope geochronometers, thermodynamics of geochemical processes, mineral stability diagrams, isotope fractionation, rates of geochemical processes, chemical weathering, chemical compositions of surface and groundwater, geochemical exploration, geochemical cycles, environmental geochemistry. Additional assignments involving data analysis and interpretation and completion of a research paper required for graduate credit. Three-hour lecture per week.

5150 Environmental Applications of Hydrogeology. Three credits. Prerequisite: GEOL 4130 or 5130 with a minimum grade of C. Advanced course that emphasizes applied methods for assessing hazardous and solid waste facilities and contaminated ground water remediation techniques. Included will be site characterization methods, ground water sampling procedures, and monitoring well installation techniques. Additional assignments involving case history analysis with an oral presentation will be required of graduate students. Three hours lecture per week.

5401- Field Course. Four credits. Supervised study in some geological
5402 area preceded by classroom preview and concluded by a time of evaluation. Emphasis on the natural and physical elements of the environment, with special attention directed toward the geomorphology and geology of scientific areas. An intensive period of study and research on a full-time basis. Work required will depend on area researched and time involved. Consult department chair for specific fees.

Some geography and/or geology courses may be accepted as either geography or geology; others are accepted only in one discipline. Substitutions are made at discretion of department chair in consultation with the academic minor advisor.

## Department of Health, Physical Education, Recreation, and Safety

Dianne Bartley, Chair<br>Murphy Athletic Center 111

The Department of Health, Physical Education, Recreation, and Safety offers two Master of Science degrees: one with a major in Health, Physical Education, and Recreation with concentrations in Health, Physical Education, Recreation, and Sport Management and one with a major in Exercise Science and Health Promotion. All students in the Master of Science program in Health, Physical Education, and Recreation must choose one of the four concentrations.
The department also offers the Ph.D. in Human Performance with specializations in four areas: Exercise Science, Health, Leisure Studies, and Physical Education.

A score of 35 on the Miller Analogies test or 750 on the Graduate Record Examination is expected for admission to the M.S. in HPER and the M.S. in Exercise Science and Health Promotion. Three letters of reference will be required as of August 2004 (pending Tennessee Board of Regents approval). For admission to the doctoral program, a score of 1000 on the GRE is expected.

## Admissions Process

Listed below are the general admission and graduation standards for the M.S. in HPER, the M.S. in Exercise Science and Health Promotion, and the Ph.D. in Human Performance. Applications for Summer/Fall admission must be complete by March 31 and applications for Spring admission must be complete by October 31. Late applicants who meet the admission criteria may be considered on a case-by-case basis.

## Requirements for the Master of ScienceHPER Major (5000 and 6000 level)

## Thesis Option

Candidate must

1. have earned undergraduate prerequisites of at least 18 semester hours in HPERS professional courses or a bac-
calaureate degree from an approved college in an area determined by the admissions committee to be related to the competencies required in the field of health, physical education, and recreation.
2. complete 30 semester hours of academic work to include thesis requirements; degree core course requirements (HPER 6610; HPER 6700); and 21 semester hours of concentration requirements to be selected in consultation with the candidate's advisor. NOTE: No more than 30 percent of the total degree hours (or 3 courses) at the 5000 level can be counted toward the degree.
3. complete a minimum of 3 semester hours of thesis credit.
4. select a thesis committee composed of two members, one of whom must be from the Department of HPERS.
5. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
6. successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice).
7. successfully complete an oral examination relating to the thesis.
Candidate may incorporate 6 semester hours of designated cognate courses or a minor of 12 semester hours into the program upon approval of the graduate advisor and the dean of Graduate Studies.

## Nonthesis Option

## Candidate must

1. have earned undergraduate prerequisites of at least 18 semester hours in HPERS professional courses or a baccalaureate degree from an approved college in an area determined by the admissions committee to be related to the competencies required in the field of health, physical education, and recreation.
2. complete 32 semester hours of academic work to include degree core course requirements (HPER 6610, HPER 6700) and 26 semester hours of concentration requirements to be selected in consultation with the candidate's advisor. NOTE: No more than 30 percent of the total degree hours (or 3 courses) at the 5000 level can be counted toward the degree.
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
4. successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice).
Candidate may incorporate 6 semester hours of designated cognate courses or a minor of 12 semester hours into the program upon approval of the graduate advisor and the dean of Graduate Studies.

## Concentration: Health

Candidate must have earned appropriate undergraduate prerequisites.

## Core Requirements (6 hours):

HPER 6610 Research Methods in HPERS
HPER 6700 Data Analysis and Organization for Human Performance

Concentration Requirements (15 hours):
HLTH 6100 Health Education and Behavior
HLTH 6510 The Nation's Health
HLTH 6850 Methods in Epidemiology
HLTH 6860 Program Planning for Health Promotion
HLTH 5600 Technology Applications
HLTH 5601 Technology Applications Lab
Guided Electives ( $\mathbf{6}$ hours, thesis option; 8 hours, nonthesis option)
HLTH 5270 Bioethical Issues in Health Education
HLTH 5340 Wellness and Healthy Lifestyles
HLTH 5900 Certified Health Education Specialist (CHES) Review
HLTH 6000 Stress Management in Health and Health Promotion
HLTH 6010 Holistic and Complementary Health Care
HLTH 6020 Somatic Therapy Techniques for Health Care Providers
HLTH 6500 Pathopharmacology in Health and Human Performance
HLTH 6870 Health Promotion
HLTH 6930 Principles and Philosophy of School Health Education Programs
HLTH 6950 Advanced Methods of Community Health Education
HLTH 6960 Health Dimensions
HLTH 6970 Advanced Methods in Human Sexuality Education
Student is required to select either the thesis or nonthesis option.
Thesis Option Requirement:
HLTH 6640 Thesis Research (3 hours minimum requirement; no more than 3 hours apply to degree)

## Nonthesis Option Requirement:

HLTH 6880 Internship/Special Projects (3 hours minimum)

## Concentration: Physical Education (NCATE Accredited)

Candidate must have earned appropriate undergraduate prerequisites.

## Core Requirements (6 hours):

HPER 6610 Research Methods in HPERS
HPER 6700 Data Analysis and Organization for Human Performance
Concentration Requirements (18 hours):
FOED 6020 Educational Foundations
SPSE 6430 Introduction to Curriculum Development
EXSC 6650 Physiological Bases of Human Performance
PHED 6800 Program Planning in Physical Education
PHED 6820 Administration and Supervision of Physical Education and Sport
EXSC 6830 Measurement in Exercise and Sport
Electives (3-8 hours)*
PHED 6500 Legal Issues and Risk Management in Physical Education, Sport, and Leisure Services
PHED 6630 Philosophy and Principles of Human Performance
EXSC 6840 Advanced Principles of Exercise Prescription and Assessment
PHED 6910 Independent Study in Health, Physical Education, and Recreation
PHED 5600 Technology Applications
PHED 5601 Technology Applications Lab
PHED 5910 Kinesiology
PHED 5950 Adaptive Physical Education
ATHC 5060 Sports Psychology
ATHC 5690 Psychology of Coaching
ATHC 5800 Administration of High School and College Athletics
PHED 6640 Thesis Research ( 3 hours minimum requirement; no more than 3 hours apply to degree)

[^4]
## Concentration: Recreation

Candidate must have earned appropriate undergraduate prerequisites.

## Core Requirements (6 hours):

HPER 6610 Research Methods in HPERS
HPER 6700 Data Analysis and Organization for Human Performance
Concentration Requirements (12 hours):
REC 6500 Legal Issues and Risk Management in Physical Education, Sport, and Leisure Services
REC 6510 Financial Management and Marketing of Leisure Services
REC 6520 Management Practices in Recreation and Leisure
REC 6530 Historical and Philosophical Principles in Recreation and Leisure Services
REC 6570 Issues, Trends, and Research in Recreation
REC 6670 Behavioral Concepts in Recreation and Leisure Services
Concentration Electives (9-12 hours):
In consultation with the advisor, student selects a minimum of: a) if thesis option, 3-6 hours from the Recreation and Leisure Services courses listed below and 3-6 hours of non-REC coursework, or b) if nonthesis option, 6-9 hours from the Recreation and Leisure Services courses listed below and 3-6 hours of non-REC coursework. NOTE:
Students are highly encouraged to take non-REC course(s) outside the department.
REC 5340 Wellness and Healthy Lifestyles
REC 5380 Introduction to Recreation for Persons with Disability
REC 5480 Recreational Therapy Techniques
REC 5490 Campus Recreation
REC 5500 Introduction to Recreational Therapy
REC 5510 Recreational Therapy in Clinical Settings
REC 5520 Transitional and Community Recreational Therapy
REC 5560 Field Studies in Recreation and Parks
REC 5570 Outdoor Recreation Workshop
REC 5580 Seminar: Outdoor Recreation and Environmental Issues
REC 5590 Readings in Parks and Recreation
REC 5600 Technology Applications
REC 5601 Technology Applications Lab
REC 5660 Evaluation of Recreation and Leisure Services
REC 5790 Sport and Society
REC 5920 Special Problems
REC 6500 Legal Issues and Risk Management in Physical Education, Sport, and Leisure Services
REC 6510 Financial Management and Marketing of Leisure Services
REC 6520 Management Practices in Recreation and Leisure
REC 6530 Historical and Philosophical Principles in Recreation and Leisure Services
REC 6550 Outdoor Environmental Education
REC 6570 Issues, Trends, and Research in Recreation
REC 6670 Behavioral Concepts in Recreation and Leisure Services
Thesis Option Requirements:
REC 6640 Thesis Research (3 hours minimum requirement; no more than 3 hours apply to degree)

## Nonthesis Option Requirements

REC 6910 Independent Study in Health, Physical Education, and Recreation (2 hours minimum requirement; no more than 2 hours apply to degree)

## Concentration: Sport Management

Candidate must have earned appropriate undergraduate prerequisites.
Core Requirements ( 6 hours):
HPER 6610 Research Methods in HPERS
HPER 6700 Data Analysis and Organization for Human Performance
Concentration Requirements (18 hours):
PHED 6500 Legal Issues and Risk Management in Physical Education, Sport, and Leisure Services
PHED 6510 Sport Management
PHED 6520 Sport Event Planning, Promotion, and Fundraising
PHED 6630 Philosophy and Principles of Human Performance
PHED 6820 Administration and Supervision of Physical Education and Sport
PHED 6050 Facilities and Equipment for Physical Education and Sport
Electives (5 hours):
ACTG 6000 Survey of Accounting Principles
ATHC 5060 Sport Psychology
ATHC 5800 Administration of High School and College Athletics
BLAW 6430 Legal Environment of Management
FIN 6000 Survey of Financial Management
HIST 5680 History of Sport in America
MC 6300 Media Law and Ethics
MGMT 6000 Management and Operations Concepts
PHED 5600 Technology Applications
PHED 5601 Technology Applications Lab
PHED 6910 Independent Study in Health, Physical Education, and Recreation
REC 5790 Sport and Society
Thesis Option Requirement:
PHED 6640 Thesis Research ( 3 hours minimum requirement; no more than 3 hours apply to degree)

## Nonthesis Option Requirement:

PHED 6880 Internship/Special Project (3 hours minimum)
NOTE: All students (thesis or nonthesis) MUST do an internship, PHED 6880, at the end of their coursework.

## Requirements for the Master of ScienceExercise Science and Health Promotion Major (5000 and 6000 level)

## Thesis Option:

Candidate must

1. have completed a course in human anatomy and physiology, be certified in CPR, and submit three letters of recommendation.
2. complete 30 semester hours to include the following courses:
Required courses - preferred sequence ( 21 hours):
HPER 6700 Data Analysis and Organization for Human
Performance
EXSC 6650 Physiological Bases of Human Performance
HPER 6610 Research Methods in HPERS
EXSC 6830 Measurement in Exercise and Sports
EXSC 6840 Advanced Principles of Exercise Prescription and Assessment
EXSC 6880 Internship/Special Project in Exercise Science and Health Promotion
EXSC 6640 Thesis Research
Approved electives (9 hours):
Nine hours of electives selected in consultation with advisor.
3. select a thesis committee composed of two members, one of whom must be from the Department of HPERS.
4. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
5. successfully complete a written comprehensive examination (may be taken no more than twice).
6. successfully complete an oral examination relating to the thesis.

## Nonthesis Option:

## Candidate must

1. have completed a course in human anatomy and physiology, be certified in CPR, and submit three letters of recommendation.
2. complete 36 semester hours which include the following courses:

## Required courses (24 hours)

| HPER | 6610 Research Methods in HPERS |
| :--- | :--- |
| HPER | 6700 Data Analysis and Organization for |
|  | Human Performance |
| EXSC | 6650 Physiological Bases of Human Performance |
| EXSC | 6830 Measurement in Exercise and Sport |
| EXSC | 6840 Advanced Principles of Exercise Prescription |
| and Assessment |  |
| EXSC | 6880 Internship/Special Projects <br> EXSC <br> 6890 <br> Seminar in Exercise Science and Health <br>  <br> Promotion |

## Approved electives (12 hours)

Twelve hours of electives selected in consultation with advisor.
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
4. successfully complete a written comprehensive examination during the last semester of coursework (may be taken no more than twice).

## Requirements for the Doctor of Philosophy in Human Performance ( 6000 and 7000 level)

The Ph.D. degree is offered for the purpose of developing doctoral level expertise in research (both applied and theoretical) and as preparation for teaching at the collegiate level.
The Ph.D. in Human Performance requires 60 credit hours past the master's degree. A maximum of 12 hours from the master's degree may be transferred in from an accredited doctoral program. Two-thirds of the program must be at the 7000-level.

The general degree plan includes 10 hours of pedagogy, 15 hours of research tools, 23 hours in coursework and independent research in one of four areas of specialization (Exercise Science, Health, Leisure Studies, Physical Education). Twelve credit hours of dissertation are included in the 60 hours required.

## Admission

Requirements for the consideration of admission include

1. an expected GRE score of 1000 combined verbal and quantitative.
2. a 3.00 GPA on last 60 credit hours of academic work (master's plus bachelor's).
3. three letters of recommendation.
4. a 400-word essay.
5. research skills ( 6 credit hours of statistics/research methods equivalent to HPER 6700 and 6610).
6. a master's degree (bachelor's or master's degree must be in a related area).
NOTE: Admittees will have completed a thesis or scholarly equivalent as part of their master's degrees.

## Pre-dissertation Advising

Upon admission to the Ph.D. program the candidate will be assigned an advisor who (in cooperation with the graduate coordinator) will serve to advise the student on an appropriate program of study and of any deficiencies to correct.

## Qualifying Examinations

Upon completion of coursework the candidate will be eligible to take written qualifying exams.
The written exams will be structured to test the student on the breadth of knowledge gained from statistics, research methods, and design components as well as the specialization component. All exams are to be taken within one calendar year.

## Advancement to Candidacy

Upon completion of the Written Qualifying Exams the student will file an Advancement to Candidacy form with the Graduate Studies Office. No more than six credit hours of C grade will count toward the Ph.D. degree requirements. D and $F$ grades will not count toward degree requirements but will be computed in the GPA. The student must have a GPA of 3.25 for the program of studies to advance to candidacy.

## Dissertation Committee

Following advancement to candidacy the student will formally construct his/her dissertation committee. The committee should include at a minimum three faculty members; two must be from the department and one must be from outside the department. The chair of the committee must be a doctoral-level graduate faculty member.

## Residency

Ph.D. students must be enrolled in full-time study ( 9 semester hours) for at least one semester to fulfill residency requirements.

## Time Limit

There is a ten-year limit for completing all Ph.D. degree requirements, i.e., all doctoral coursework taken at MTSU, as well as the dissertation must be completed within ten years of the first semester of enrollment.

## Courses in Exercise Science [EXSC]

5240 Principles of Exercise Prescription and Assessment. Three credits. Prerequisites: EXSC 4810 and 4830; PHED 4910. Application of knowledge gained to practical situations; develop proficiency in using equipment and skills to evaluate an individual's health risks and fitness.

5920 Special Problems. One, two, or three credits. (Same as HLTH/ PHED/REC 5920.) Presentation and discussion of research work in physical education, recreation, health and safety education, or athletics. (A maximum of three semester hours may be applied toward a degree.)

6640 Thesis Research. One to six credits. (Same as HLTH/PHED/REC 6640.) Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6650 Physiological Bases of Human Performance. Three credits. Principles of exercise physiology. Acute responses and chronic adaptations of the body to physical activity, exercise, and sports participation and their impact on homeostasis examined. Physiological systems examined in detail.

6830 Measurement in Exercise and Sport. Three credits. Measurement theory related to reliability, objectivity, and validity, with application to real world testing situations in the field of health and human performance. Practical experience of testing through labs and/or a research project, including computer analysis and interpretation of reliability and validity data.

6840 Advanced Principles of Exercise Prescription and Assessment. Three credits. Prerequisite: EXSC 4240 or equivalent. Provides theoretical and laboratory learning experiences for health risk appraisal, cardiovascular evaluation, and exercise prescription for healthy people and special populations.

6880 Internship/Special Projects. Three to six credits. (Same as HLTH/ PHED 6880.) On-site practical experience in an exercise science, health promotion, or sport management program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

6890 Seminar in Exercise Science and Health Promotion. Three credits. Current issues and research in exercise science and health promotion. Written and oral presentation of a research project required.

6910 Independent Study in Health, Physical Education, and Recreation. One, two, or three credits. (Same as HLTH/PHED/REC 6910.) Individual study of current problems or areas of interest. S/U grading.

7100 Mechanical Analysis of Sports Skills. Three credits. A synthesis of scientific principles as they relate to teaching simple and complex motor patterns.

7200 Applied Human Exercise Physiology. Three credits. Prerequisite: EXSC 6650. Investigation of how the physiological response to exercise is impacted by intensity, duration, type of muscular contraction, limbs involved, and body position.

## Courses in Human Performance [HPER]

6610 Research Methods in HPERS. Three credits. Location of information, methods of research, methods of collecting data, application of the computer in analyzing data, and preparation and presentation of a research paper.

6700 Data Analysis and Organization for Human Performance. Three credits. Prerequisites: PHED 4810 or equivalent, good understanding of mathematical concepts, and computer literacy. Pertinent skills needed to analyze and organize research data through introduction of concepts, principles, techniques, and activities that lead to the appropriate organization and analysis of research data collected for health and human performance.

7030 Research Seminar in Human Performance. Three credits. Current problems, issues, trends, and research in human performance; selected lectures, reports, and class discussion.

7060 Field Work or Laboratory Experiment in Human Performance. One to six credits. Professional assignments in human performance appropriate to the student's background and interests will be pursued.

7080 Professional Preparation in Human Performance. Three credits. Comparisons of current programs and trends; the development of individual programs.

7600/ 7610 Practicum in Human Performance. Two credits. Careful supervision given to actual teaching, clinical, or research experience. Assignment by department or chair of candidate's committee. $\mathrm{S} / \mathrm{U}$ grading.

7640 Dissertation Research. One to six credits. Assignment by department or chair of candidate's committee. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled, student should register for at least one credit hour of doctoral research each semester until completion. S/U grading.

7700 Advanced Data Analysis and Organization for Human Performance. Three credits. Prerequisites: HPER 6610 and 6700 or equivalent. Skills and understanding necessary to read, conduct, report, and interpret advanced data analytical techniques using data from HPER. Practical and written assignments, presentations, examinations, and projects will furnish doctoral student with tools necessary for data analysis associated with dissertation requirement.

7710 Experimental Design in Human Performance. Three credits. Prerequisites: HPER 6610 and 7700 or equivalent. Skills and understanding necessary to evaluate designs used in HPER research literature. Practical and written assignments, evaluation of current research, examinations, and projects; knowledge and skills for planning appropriately the design for future research projects.

## Courses in Physical Education [PHED]

5340 Wellness and Healthy Lifestyles. Three credits. (Same as HLTH and REC 5340.) Developing healthy lifestyles through health appraisal, fitness evaluation, identification of cardiovascular risk factors, and individual exercise prescriptions.

5600 Technology Applications. One credit. (Same as HLTH and REC 5600.) Prerequisite: Introductory course in computer literacy or equivalent with instructor permission. Corequisite: 5601. Focus on understanding of and competency in use of a variety of tech-
nology applications related to the profession. Students will be required to enroll in the corresponding lab during the same semester.

5601 Technology Applications Lab. Two credits. (Same as HLTH and REC 5601.) Corequisite: PHED 5600. Investigation and application of profession-specific software and hardware applications.

5700 Skills and Techniques of Teaching Rhythmic Activities. Three credits. (Same as DANC 5700.) Various dance forms, methods and materials, evaluative procedures, and experiences in teaching all forms of dance to students at the K-12 level.

5810 Directing Intramural. Two credits. The organization and administration of intramural programs. Actual participation in developing and supervising intramural activities.

5910 Kinesiology. Three credits. The science of human motion. Emphasis on principles of anatomy, physiology, and mechanics of human activity.

5920 Special Problems. One, two, or three credits. (Same as EXSC/ HLTH/REC 5920.) Presentation and discussion of research work in physical education, recreation, health and safety education, or athletics. (A maximum of three semester hours may be applied toward a degree.)

5950 Adaptive Physical Education. Three credits. Principles of planning and conducting physical education to provide for the special needs, interests, and abilities of exceptional students. Field work in local schools and community agencies.

6050 Facilities and Equipment for Physical Education and Sport. Three credits. The planning of areas and facilities related to physical education, athletics, and sport. Clinical or field experience required of students with a sport management concentration.

6500 Legal Issues and Risk Management in Physical Education, Sport, and Leisure Services. Three credits. (Same as REC 6500.) Understanding the legal basis for management actions, concepts of legal liability including torts and contracts as applied to physical education, sport, and leisure services organizations. Emphasis on the ability to plan, develop, and implement risk management programs.

6510 Sport Management. Three credits. Overview of careers in sport management and psychosocial aspects of sport, philosophical foundations, management thought, organizational behavior, business, communication, marketing, intercollegiate athletics, public recreation, event and facility management, and professional sport.

6520 Sport Event Planning, Promotion, and Fundraising. Three credits. Overview of marketing practices in the sport business industry; theory; pricing, distribution, and promotional technique of sport; media relations; endorsement and sponsorships; and licensing.

6630 Philosophy and Principles of Human Performance. Three credits. The philosophic basis of human performance and the scientific principles which provide a base for the development of sound programs.

6640 Thesis Research. One to six credits. (Same as EXSC/HLTH/REC 6640.) Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

6800 Program Planning in Physical Education. Three credits. Modern programs of physical education for all grade levels and the contribution of activities to the goals of education.

6801 Advanced Sport and Exercise Psychology. Three credits. Examines the psychological factors that explain high quality performance in sport and exercise. Sample topics include motivation, coaching psychology, the use of mental skills, communication strategies, and factors that affect participation and adherence to exercise.

6820 Administration and Supervision of Physical Education and Sport. Three credits. The organization, planning, and functions involved in administering and supervising programs of physical education and sport. Clinical or field experience required of students with a sport management concentration.

6880 Internship/Special Projects. Three to six credits. (Same as EXSC/ HLTH 6880.) On-site practical experience in an exercise science, health promotion, or sport management program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

6910 Independent Study in Health, Physical Education, and Recreation. One, two, or three credits. (Same as EXSC/HLTH/REC 6910.) Individual study of current problems or areas of interest. S/U grading.

6999/ 7999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7000 Adapted Physical Activity. Three credits. Cognitive, neuromuscular, sensory, and orthopedic impairments; identification of current topics and procedures for testing and programming for individuals with disabilities; current research findings and practices to assist students in developing necessary skills to design and implement appropriate physical activity programs for individuals with disabilities.

7010 Analysis and Criticism of Professional Literature. Three credits. Thorough consideration of selected specialized literature most likely to influence physical education programs, procedures, and practices in the school and community.

7020 College Physical Education Administration. Three credits. Provides administrators and professional students with a broad base of workable administrative principles and guides.

7040 History of Physical Education. Three credits. The role of physical activity in the lives of people from antiquity to the present with an emphasis on the major events, movements, and people that have influenced the development of physical education.

7090 Motor Learning in Physical Education. Three credits. Theories of learning related to the acquisition of motor skills; a review of the literature pertaining to motor skill development and the implications for teaching.

7630 Pre-Dissertation Seminar. Two credits. Prerequisites: HLTH/ PHED/REC 6610 and 6700 or equivalent. Gives doctoral students an opportunity to discuss the process of conducting dissertation and issues concerning research at the university. Grant writing also addressed.

## Courses in Health [HLTH]

5270 Bioethical Issues in Health Education. Three credits. Analysis of current bioethical issues, problems, needs, trends, and interests in health education.

5280 Instructor Course: First Aid and CPR. Two credits. Prerequisite: HLTH 3300 or current American Red Cross certification in multimedia first aid or standard first aid and CPR. Organizing, planning, and teaching American Red Cross safety courses. Red Cross instructor certification awarded for successful completion.

5290 Corrective Therapy-Clinical Training Program. Nine credits. Orientation, observation, and practice in the methods and techniques of medical rehabilitation and application of physical education principles to the treatment of illness and injury. Studenttrainee program affiliated with the Veterans Administration Hospital, Murfreesboro; training designed to prepare therapists for medical treatment programs.

5310 Health Problems of Exceptional Children. Three credits. Common health problems with emphasis on those peculiar to children in various areas of exceptionality. Consideration given to identification and referral.

5340 Wellness and Healthy Lifestyles. Three credits. (Same as PHED and REC 5340.) Developing healthy lifestyles through health appraisal, fitness evaluation, identification of cardiovascular risk factors, and individual exercise prescriptions.

5600 Technology Applications. One credit. (Same as PHED and REC 5600.) Prerequisite: Introductory course in computer literacy or equivalent with instructor permission. Corequisite: 5601. Focus on understanding of and competency in use of a variety of technology applications related to the profession. Students required to enroll in the corresponding lab during the same semester.

5601 Technology Applications Lab. Two credits. (Same as PHED and REC 5601.) Corequisite: HLTH 5600. Investigation and application of profession-specific software and hardware applications.

5900 Certified Health Education Specialist (CHES) Review. One credit. Responsibilities and competencies on the Certified Health Education Specialist examination. Pass/Fail.

5920 Special Problems. One, two, or three credits. (Same as EXSC/ PHED/REC 5920.) Presentation and discussion of research work in physical education, recreation, health and safety education, or athletics. (A maximum of three semester hours may be applied toward a degree.)

6000 Stress Management in Health and Health Promotion. Three credits. Evaluation techniques and instruments considered. Effects of stress on physical and mental domains of health examined. Methods of conducting stress management workshops and classes emphasized.

6010 Holistic and Complementary Health Care. Three credits. Concepts and theories that make up the disciplines and practices constituting the holistic and complementary approach to health promotion and disease treatment and prevention.

6020 Somatic Therapy Techniques for Health Care Providers. Three credits. (Same as ATHT 6020.) Theoretical concepts, knowledge, theories, and history of Somatic Therapy. Emphasis on SwedishEsalen, Sports Massage, Shiatsu, and Connective Tissue. Includes advanced rehabilitative and therapeutic modality techniques. Combines didactic and some experiential opportunities.

6100 Health Education and Behavior. Three credits. Links behavioral change to practical application in the design and implementation of individual and group programs in health education and behavior.

6500 Pathopharmacology in Health and Human Performance. Three credits. Etiology and pathology of disease and how functional physiological changes affect health and human performance. Involves the study of pharmacological considerations used in the treatment of disease and musculoskeletal conditions.

6510 The Nation's Health. Three credits. Investigates the determinants of health and the role of public health and health care on the health status of the population of the United States. Study of biological, socioeconomic, cultural, and behavioral factors that influence health status and care in America.

6610 Research Methods in HPERS. Three credits. (Same as REC 6610.) Location of information, methods of research, methods of collecting data, application of the computer in analyzing data, and preparation and presentation of a research paper.

6640 Thesis Research. One to six credits. (Same as EXSC/PHED/REC 6640.) Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6700 Data Analysis and Organization for Human Performance. Three credits. (Same as REC 6700.) Prerequisites: PHED 4810 or equivalent, good understanding of mathematical concepts, and computer literacy. Pertinent skills needed to analyze and organize research data through introduction of concepts, principles, techniques, and activities that will lead to the appropriate organization and analysis of research data collected for health and human performance.

6850 Methods in Epidemiology. Three credits. Principles and methods of epidemiologic analysis including standardization; stratified analysis; confounding and its control; planning and conducting epidemiologic research; role of multivariate analysis in epidemiologic research.

6860 Program Planning for Health Promotion. Three credits. Program planning, theories and models of health education and promotion, development of interventions, and program implementation, including mission, goals, objectives, and activities of health education and promotion programs. Introduces needs assessment and program evaluation.

6870 Health Promotion. Three credits. Health promotion knowledge as well as the ability to impart this knowledge to the lay population. In-depth information will be covered regarding lifestyle and its relationship to risk factors for cardiovascular disease and cancer.

6880 Internship/Special Projects. Three to six credits. (Same as EXSC/ PHED 6880.) On-site practical experience in an exercise science, health promotion, or sport management program. Those with extensive work experience will develop, implement, and conclude a project (research or applied) in consultation with the major professor.

6910 Independent Study in Health, Physical Education, and Recreation. One, two, or three credits. (Same as EXSC/PHED/REC 6910.) Individual study of current problems or areas of interest. S/U grading.

6930 Principles and Philosophy of School Health Education Programs. Three credits. A detailed overview.

6950 Advanced Methods of Community Health Education. Three credits. Review of program planning, development of interventions, and implementation of programs. Budgeting, needs assessment, and evaluation of health education and promotion programs covered.

6960 Health Dimensions. Three credits. Advanced content for teachers of personal and community health; designed for up-dating professional preparation and for gaining additional in-depth basics utilized in curriculum planning, teaching, public service, and research by school health educators.

6970 Advanced Methods in Human Sexuality Education. Three credits. Methodology, teaching techniques, and the organization of sexuality education programs for schools (K-12) and other community settings. Additional emphasis directed to concepts and information about human sexuality education, i.e., the psychological, physiological, sociological, and ethical aspects.

7120 Research in Epidemiology. Three credits. Advanced study in epidemiological analysis, methods, and critique with an emphasis within the field of health and human performance. Areas include epidemiology and chronic disease, public health, exercise science, and sports medicine.

## Courses in Athletic Coaching [ATHC]

5060 Sport Psychology. Three credits. (Same as PSY 5060.) Application of the knowledge base of psychology to the human endeavors of athletics. Introduction of behavioral principles, motivational research, personality factors, social/psychological findings, cognitive processes, dysfunctional behavior knowledge, and psychometric assessment procedures for the purpose of enhancing performance.

5180 Coaching Speed/Strength Conditioning for Sports. Three credits. Organizing and developing speed and strength conditioning programs for sports. Setting up and supervising proper methods and techniques in running, weight lifting, and conditioning exercise for athletics today.

5220 Coaching Soccer. Two credits. Theory and practice of soccer fundamentals as well as introduction of offensive and defensive plays.

5600 Advanced Coaching of Football. Two credits. Philosophies of coaching football and close examination of the master plan of coaching responsibilities.

5620 Advanced Coaching of Basketball. Two credits. Philosophies of coaching basketball discussed, along with a detailed study of the master plan of coaching responsibilities.

5640 Coaching of Baseball. Two credits. Theory and practice in baseball fundamentals as well as reviewing the various systems and types of plays.

5650 Coaching Cross-Country, Track and Field. Two credits. Theory and practice in fundamentals and skills.

5680 Coaching and Judging Women's Gymnastics. Three credits. Includes classroom instruction and practical experience in principles and techniques of coaching, spotting, and judging women's gymnastics; a USGF Judges Rating may be obtained.

5690 Psychology of Coaching. Three credits. Application of basic psychological principles to everyday coaching situations and problems. Designed to improve communication and motivation for players and coaches.

5800 Administration of High School and College Athletics. Three credits. National, state, and local policies concerning athletic eligibility, contest management, equipment, awards, finances, budgets, safety, maintenance of facilities, public relations, publicity, and current athletic trends.

## Courses in Athletic Training [ATHT]

5610 Prevention and Care of Athletic Injuries. Three credits. Theory and practice in the prevention and care of athletic injuries including treatment, taping, and rehabilitation.

5960 Rehabilitation Techniques in Sports Medicine. Three credits. Methods and techniques in the selection and application. The N.A.T.A. Competencies in Athletic Training will be a guideline for knowledge that each student should obtain. Students will engage in the process of reviewing, analyzing, discussing, and reflecting about athletic training.

5970 Therapeutic Modalities in Sports Medicine. Three credits. Methods and techniques in the application of selected therapeutic modalities and the evaluation of injuries relative to modalities. The N.A.T.A. Competencies in Athletic Training will be a guideline for knowledge that each student should obtain. Reviewing, analyzing, discussing, synthesizing, and reflecting about athletic training.

6020 Somatic Therapy Techniques for Health Care Providers. Three credits. (Same as HLTH 6020.) Examines the concepts, knowledge, theories, and history of Somatic Therapy. Emphasis on Swedish-Esalen, Sports Massage, Shiatsu, and Connective Tissue. Includes advanced rehabilitative and therapeutic modality techniques and combines didactic and some experiential opportunities.

## Courses in Recreation [REC]

5340 Wellness and Healthy Lifestyles. Three credits. (Same as HLTH and PHED 5340.) Developing healthy lifestyles through health appraisal, fitness evaluation, identification of cardiovascular risk factors, and individual exercise prescriptions.

5380 Introduction to Recreation for Persons with Disability. Three credits. Important issues such as advocacy, accessibility, legalities, and the importance of and broad range of opportunities in the provision of recreational services for persons with disability in our society.

5470 Leisure and Aging. Three credits. Aging relative to the individual, family, peers, and society with an emphasis on leisure. The holistic approach including physical, psychological, social, cultural, environmental, and cognitive aspects explored. Interdisciplinary approach ideal for the developing or practicing human service professional.

5480 Recreational Therapy Techniques. Three credits. Activity-based therapeutic interventions currently utilized to alleviate existing health-related problems, maintain current level of functioning, or to assist in overall rehabilitation efforts of transdisciplinary treatment team.

5490 Campus Recreation. Three credits. For those wishing to acquire a specific and comprehensive knowledge of the recreational sports program and an understanding of its place and value in education and society.

5499 Therapeutic Terminology in Recreational Therapy. Three credits. Offers preparation for establishing a vital knowledge base necessary to work in today's fast changing rehabilitation settings. Terminology related to third-party reimbursement, accreditation of health care organizations, and basic medical abbreviations used in charting.

5500 Introduction to Recreational Therapy. Three credits. Prerequisite: REC 3010. Explores the profession of recreational therapy, the wide range of disabilities, and the role of intervention in a variety of settings: clinical, community, and transitional. Topics include history, philosophy, professional development/certification, systemic program design, and implementation.

5510 Recreational Therapy in Clinical Settings. Three credits. Prerequisites: REC 3010 and 4500. Increases understanding of recreational therapy in clinical settings working with persons with health-related issues and/or disabilities. Concepts of disease and disability, holistic approach, interdisciplinary treatment, assessment, intervention planning and implementation, evaluation, documentation, and third-party reimbursement explored.

5520 Transitional and Community Recreational Therapy. Three credits. Issues clients may face when leaving institutions and returning to their communities. Examines the role and provision of recreational therapy services in transitional and communitybased settings.

5540 Organization and Administration of Recreation. Three credits. Prerequisites: REC 3010 and 9 hours of recreation courses. Duties and responsibilities of an administrator and how these are performed.

5560 Field Studies in Recreation and Parks. Three credits. Prerequisites: REC 2500 and 3530 . Opportunity for supervised practical application of classroom theory in professional field work.

5570 Outdoor Recreation Workshop. Three credits. Off-campus course that provides materials and experiences not available in the classroom. Exposure to issues, trends, and concerns relevant to outdoor recreation, resource management, and the delivery of programs and services in outdoor environments. Public, private non-profits, and commercial agencies experienced through a series of field trips, lectures, group exercises, and other expe-riential-based activities.

5580 Seminar: Outdoor Recreation and Environmental Issues. Three credits. Awareness of the importance of environmental considerations when planning, managing, or administering outdoor recreation programs. Includes environmental issues and methods of seeking solutions to environmental problems.

5590 Readings in Parks and Recreation. Three credits. In-depth reading and preparation of an annotated bibliography and report. Arrangements for this course should be made with the instructor prior to registration.

5600 Technology Applications. One credit. (Same as HLTH and PHED 5600.) Prerequisite: Introductory course in computer literacy or equivalent with instructor permission. Corequisite: 5601. Focus on understanding of and competency in use of a variety of technology applications related to the profession. Students required to enroll in the corresponding lab during the same semester.

5601 Technology Applications Lab. Two credits. (Same as HLTH and PHED 5601.) Corequisite: REC 5600. Investigation and application of profession-specific software and hardware applications.

5660 Evaluation of Recreation and Leisure Services. Three credits. Research and evaluation procedures and techniques applicable to assessing recreation and leisure service programs, participants, administrative structures, and resources. Emphasis on beginning and completing a "real-world" evaluation project.

5790 Sport and Society. Three credits. (Same as SOC 5790.) A behavioral approach to the sport and leisure phenomena from the related perspectives of sociology and anthropology.

5920 Special Problems. One, two, or three credits. (Same as EXSC/ HLTH/PHED 5920.) Presentation and discussion of research work in physical education, recreation, health and safety education, or athletics. (A maximum of three semester hours may be applied toward a degree.)

6500 Legal Issues and Risk Management in Physical Education, Sport, and Leisure Services. Three credits. (Same as PHED 6500.) Understanding the legal basis for management actions, concepts of legal liability including torts and contracts as applied to physical education, sport, and leisure services organizations. Emphasis on the ability to plan, develop, and implement risk management programs.

6510 Financial Management and Marketing of Leisure Services. Three credits. Principles and practices of budgeting, financial methods and strategies, and revenue sources for recreation and leisure service agencies, including cost accounting and fiscal control. Includes traditional approaches to marketing with particular focus on approaches unique to recreation and leisure services organizations.

6520 Management Practices in Recreation and Leisure. Three credits. An analysis of administrative processes and management techniques used in planning, organizing, staffing, directing, and controlling with respect to leisure service delivery systems.

6530 Historical and Philosophical Principles in Recreation and Leisure Services. Three credits. Identification of principles and practices applicable to a variety of opportunities in public, private, institutional, and industrial recreation.

6550 Outdoor Environmental Education. Three credits. Camping leadership and outdoor education principles with implications for management, planning of, and interpretation in recreation areas as well as for policy development.

6570 Issues, Trends, and Research in Recreation. Three credits. Identification and analysis. Emphasis on meaningful, outstanding studies and research in the field of recreation.

6610 Research Methods in HPERS. Three credits. (Same as HLTH 6610.) Location of information, methods of research, methods of collecting data, application of the computer in analyzing data, preparation and presentation of a research paper.

6640 Thesis Research. One to six credits. (Same as EXSC/HLTH/PHED 6640.) Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6670 Behavioral Concepts in Recreation and Leisure Services. Three credits. Social psychological concepts concerning recreation and
leisure behavior in various types of park, recreation, and tourism settings. Range of different theoretical perspectives and behavioral concepts underlying pertinent research.

6700 Data Analysis and Organization for Human Performance. Three credits. (Same as HLTH 6700.) Prerequisites: PHED 4810 or equivalent, good understanding of mathematical concepts, and computer literacy. Pertinent skills needed to analyze and organize research data through introduction of concepts, principles, techniques, and activities that will lead to the appropriate organization and analysis of research data collected for health and human performance.

6910 Independent Study in Health, Physical Education, and Recreation. One, two, or three credits. (Same as EXSC/HLTH/PHED 6910.) Individual study of current problems or areas of interest. $\mathrm{S} / \mathrm{U}$ grading.

## Courses in Safety [SAFE]

5320 Principles of Accident Control. Three credits. Principles, concepts, and methodology of the safety movement. Introductory experiences dealing with accident prevention as well as control efforts recommended by various social institutions and agencies reviewed.

5350 Automotive Transportation Safety Programs. Three credits. Federal, state, and local legislation concerning transportation control and design.

5850 Driver and Traffic Safety Fundamentals. Three credits. Prerequisite: Valid driver's license. Introduction to the field of driver and traffic safety education. Primary focus is on current concepts related to safe driving.

5870 Teaching Driver and Traffic Safety. Three credits. Prerequisite: SAFE 4850 or 5850 . Designed to develop teaching techniques for laboratory instruction including on-street, driving simulator, and multiple-car range programs.

6410 Administration and Supervision of Safety Programs in Schools and Colleges. Three credits. An overview of the total program administration through analysis of tasks, strategies, and situational factors affecting them; examines handicaps to safety programming, needed change, and methods for implementation.

6450 Field Practice in Safety Education. Three credits. Professional assignment under supervision of one or more safety educators or agency directors in school or community organizations.

6470 Disaster Preparedness and Emergency Care Systems. Three credits. Major elements involved in disasters and emergencies, preparedness planning, systems utilization, and attention to essential human services, with emphasis on community action.

6920 School Safety and Safety Education. Three credits. School safety education concepts in all disciplines and levels, including content, methodology, and teacher liability.

# Department of History 

Thaddeus Smith, Chair<br>Peck Hall 223

The History Department offers the Master of Arts with a major in History, Master of Arts with a concentration in Public History, Doctor of Arts with a major in History, Doctor of Arts with a concentration in Historic Preservation, and a graduate minor.

For the most current information about the program, department policies, and admission standards, please visit the department Web site at www.mtsu.edu/~history.
Application deadline: March 15 for Fall admission; October 15 for Spring admission.

## Requirements for the Master of ArtsHistory Major (5000 and 6000 levels only)

Admission to the program requires

1. an earned bachelor's degree from an accredited university or college.
2. at least a 3.0 grade point average in all college work taken.
3. completion of at least 18 semester hours of undergraduate history courses.
4. completion of the Graduate Record Exam. For students who took the exam prior to October 2002, a minimum score of 900 (combined verbal and analytical) is preferred for admission to the master's program. For students who took the exam after October 2002, a minimum score of 500 on the verbal section and 4.5 on the analytical writing section is preferred.
Modifications to the above requirements may be made with the permission of the department's director of graduate studies and the department's Graduate Committee.

Once admitted to the program, candidate must

1. complete 30 hours of graduate history courses with at least 70 percent of the hours to be taken at the 6000 level. The 30 hours include:
a. core seminar courses

HIST 6010 Historiography
HIST 6020 Historical Research Methods
HIST 6030 Historical Readings and Criticism
b. 9 to 12 hours of graduate courses in a thesis field: American or European history;
c. 6 to 9 hours of graduate courses (at least one course being at the 6000 level) in courses outside the thesis field;
d. HIST 6640 Thesis Research (at least 3 hours).
2. complete comprehensive examinations in the thesis field. NOTE: Students may add a field outside of history toward their master's program. Specific provisions on graduate minors are elsewhere in this catalog.
3. maintain satisfactory progress towards completion of the degree each semester.
4. fulfill a foreign language requirement by:
a. completing 12 undergraduate semester hours in one language;
b. earning a grade of A or B in GERM 4990, FREN 4990, or SPAN 4990;
c. earning at least a C in any upper-division undergraduate foreign language course taught in the language and requiring translation;
d. passing a reading examination in the language administered by the Foreign Languages and Literatures Department.
5. file a Candidacy Form with the Graduate Office prior to the completion of 24 semester hours.
submit an acceptable thesis.

## Requirements for the Master of Arts with a Concentration in Public History (5000 and 6000 levels only)

The Public History concentration offers specialized education in one of four tracks: historic preservation, museum management, cultural resource management, and archival management. All public history students must complete the seminar for their chosen track and an internship off campus. The archival track requires an additional practicum.

Admission to the program requires

1. an earned bachelor's degree from an accredited university or college.
2. at least a 3.00 grade point average in all college work.
3. completion of at least 18 semester hours of undergraduate history courses.
4. completion of the Graduate Record Exam. For students who took the exam prior to October 2002, a minimum score of 900 (combined verbal and analytical) is preferred for admission to the master's program. For students who took the exam after October 2002, a minimum score of 500 on the verbal section and 4.5 on the analytical writing section is preferred.

Modifications to the above requirements may be made with the permission of the department's director of graduate studies and the department's Graduate Committee.

Once admitted to the program, candidate must

1. complete at least 36 semester hours of graduate-level history and public history courses, with at least 70 percent of the hours to be taken at the 6000 level. The 36 hours include
a. core seminar courses

HIST 6010 Historiography
HIST 6020 Historical Research Methods
HIST 6030 Historical Readings and Criticism
b. Public History courses

HIST 6510 Seminar: Public History
HIST 6570 Public History Internship
HIST 6590 Practicum in Archival Management
c. Public History seminar option (3 hours)

HIST 6520 Seminar: Historic Preservation OR
HIST 6540 Seminar: Museum Management OR
HIST 6560 Seminar: Cultural Resource Management
d. Public History electives ( 6 hours) selected in consultation with public history faculty;
e. history electives ( 6 hours) outside the public history field (at least 3 hours of which must be at the 6000 level);
f. HIST 6640 Thesis Research (at least 3 hours).
2. fulfill a foreign language requirement in the same manner as stipulated for the Master of Arts-History Major, or complete HIST 5630 Computer and Quantitative History.
3. maintain satisfactory progress towards completion of the degree each semester.
4. file a Candidacy Form with the Graduate Office before the completion of 24 semester hours.
5. complete comprehensive examinations in the field of public history, that field to include an examination in the area of American history in which the student will complete the thesis.
6. submit an acceptable thesis.

## Requirements for the Doctor of ArtsHistory Major (6000 and 7000 levels only)

The Doctor of Arts Program is scheduled for a phase out in 2005. The department is no longer accepting students into this specific doctoral program. Approval for a Ph.D. in Public History is pending. For additional information, please contact the Department of History.
Candidate must

1. hold a master's degree and have earned at least 18 semester hours of undergraduate history credit and a minimum of 20 semester hours of graduate history credit. Deficiencies in this requirement should be removed during the first year in the program.
2. complete the Graduate Record Exam prior to consideration for admission. For applications to the Doctor of Arts program who took the GRE prior to October 2002, a minimum score of 1100 (combined verbal and analytical) is preferred. For applicants who took the exam after October 2002, a minimum score of 550 on the verbal section and 5.0 on the analytical writing section is preferred.
3. have three years of appropriate teaching and/or administrative educational experience.
4. fulfill a foreign language requirement by:
a. completing 12 undergraduate semester hours in one language;
b. earning a grade of $A$ or $B$ in GERM 4990, FREN 4990, or SPAN 4990;
c. earning at least a C in any upper-division undergraduate foreign language course taught in the language and requiring translation;
d. passing a reading examination in the language administered by the Foreign Languages and Literatures Department.
5. select one of the following programs:

## Alternative \#1

Complete a minimum of 48 semester hours of graduate courses beyond the master's level, including
a. at least 24 semester hours of graduate history courses;
b. 6 semester hours of teaching internship;
c. 6 semester hours of dissertation research and writing;
d. 12 semester hours of professional education classes consisting of FOED 7520 and 7560 and SPSE 7540 and 7550.
At least two-thirds of the above hours must be taken at the 7000 level.

## Alternative \#2

Complete a minimum of 60 semester hours of courses above the master's level, including
a. at least 18 semester hours of graduate history courses;
b. at least 18 semester hours in any other academic discipline for which MTSU offers a master's or higher degree;
c. 6 semester hours of internship;
d. 6 semester hours of dissertation research and writing;
e. 12 semester hours of professional education classes consisting of FOED 7520 and 7560 and SPSE 7540 and 7550.
At least two-thirds of the above hours must be taken at the 7000 level.
6. consult with an advisory committee during the first semester in the program to ensure the student's coursework will adequately prepare him or her for successfully completing oral and written examinations in three fields:

## Alternative \#1

a. United States History
b. Western Civilization (either before or since 1715)
c. Higher Education

Alternative \#2
A program determined by the student in consultation with the advisory committee
7. file a degree plan with the Graduate Office prior to the completion of 36 credit hours.
8. maintain satisfactory progress toward completion of the degree each semester.
9. successfully complete written and oral examinations in 1) history and 2) higher education.
10. develop and successfully defend a dissertation prospectus.
11. complete a dissertation and successfully defend it in a final oral examination.

## Requirements for the Doctor of Arts in History with a Concentration in Historic Preservation (6000 and 7000 levels only)

The Doctor of Arts Program is scheduled for a phase out in 2005. The department is no longer accepting students into this specific doctoral program. Approval for a Ph.D. in Public History is pending. For additional information, please contact the Department of History.

Candidate must

1. hold a master's degree and have earned at least 18 semester hours of undergraduate history credit and a minimum of 20 semester hours of graduate history credit. Deficiencies in this requirement should be removed during the first year in the program.
2. complete the Graduate Record Exam prior to consideration for admission. For applications to the Doctor of

Arts program who took the GRE prior to October 2002, a minimum score of 1100 (combined verbal and analytical) is preferred. For applicants who took the exam after October 2002, a minimum score of 550 on the verbal section and 5.0 on the analytical writing section is preferred.
3. fulfill a foreign language requirement in the same manner as stipulated for the Master of Arts-History Major, or complete HIST 5630 Computer and Quantitative History.
4. complete from 48 to 60 semester hours of history and professional education courses above the master's level, including
a. at least 24 semester hours of graduate history courses;
b. 6 semester hours of internship (HIST 7950 and 7960);
c. 6 semester hours of dissertation research and writing;
d. 12 semester hours of professional education courses consisting of FOED 7520 and 7560 and SPSE 7540 and 7550.
At least two-thirds of the above must be taken at the 7000 level.
5. complete a skills/tool cognate of 12 semester hours chosen in consultation with student's public history advisor;
6. consult with an advisory committee during the first semester in the program. Each student's program will include coursework in the fields of 1) historic preservation theory, 2) applied practice in historic preservation, and 3) United States history. The advisory committee will assist the student in selecting courses to satisfy these field requirements;
7. file a degree plan with the Graduate Office prior to the completion of 36 credit hours;
8. maintain satisfactory progress toward completion of the degree each semester;
9. successfully complete written and oral examinations in 1) history, 2) historic preservation, and 3) higher education;
10. develop and successfully defend a dissertation prospectus;
11. complete a dissertation and successfully defend it in a final oral examination.

## Courses in History [HIST]

5010 Colonial America. Three credits. The exploration and colonialization of North America, relations between Indians and Europeans, and the development of colonial societies and identity from 1492 to 1760.

5020 The American Revolution. Three credits. Examines international conflicts from the Seven Years' War through the War of 1812 while emphasizing political, social, intellectual, and economic developments in the new United States.

5030 Jacksonian America, 1815-1850. Three credits. The major political, social, and economic developments in the awakening of American nationalism, Jacksonian Democracy, expansionism, and the Mexican War.

5040 Civil War and Reconstruction. Three credits. Sectional differences of the 1850s. Civil War, Reconstruction, and the Grant Era.

5050 Modern America, 1877-1914. Three credits. The nature and consequences of the shift of the United States from an agrarian to an urban and industrialized society between Reconstruction and World War I.

5060 Modern America, 1914-1945. Three credits. The increasing involvement of the United States in world affairs from World War I through World War II and of the social and political consequences of economic complexity which resulted in prosperity, depression, and the New Deal.

5070 Modern America, Post-1945. Three credits. The major social, political, economic, and diplomatic developments in the history of the United States from 1945 to the present with particular emphasis on the role of the United States in world affairs and the changing role of government.

5130 The Sunbelt. Three credits. The Southern rim of states from a nineteenth-century American outpost to the modern pacesetting position in economics, culture, racial relationships, and politics with such leaders as King, Nixon, Carter, and Reagan.

5140 The West. Three credits. The role of the frontier in American history. Emphasis on the trans-Mississippi West.

5150 The American South. Three credits. The major themes that have created and recreated southern culture from the colonial period to the present. Major social, political, and economic factors that made and remade the region through time.

5210 Middle Ages. Three credits. An intensive survey of the progress of medieval civilization with emphasis on Byzantine, Moslem, and Germanic cultures in the Middle Ages.

5212 Intellectual and Cultural History of Early Modern Europe. Three credits. Major trends and movements in artistic, literary, social, economic, political, scientific, and religious thought in cultural context and diffusion in society; how these trends and movements have changed European concepts since the Enlightenment. Begins about 1200 to establish a background and then focuses on 1400 to 1789.

5213 Intellectual and Cultural History of Modern Europe. Three credits. Major trends and movements in artistic, literary, social, economic, political, scientific, and religious thought in cultural context and diffusion in society; how these trends and movements have changed European concepts since the Enlightenment. Begins about 1650 to establish a background and then focuses on 1789 to the present.

5220 Renaissance Europe. Three credits. Survey of political, economic, social, intellectual, and cultural developments of Italy, France, England, Germany, and the Low Countries during the fourteenth through the seventeenth centuries.

5230 Reformation Europe. Three credits. Survey of political, economic, social, intellectual, and cultural developments of Italy, France, England, Germany, and the Low Countries during the sixteenth and seventeenth centuries.

5240 Europe: Absolutism and Enlightenment. Three credits. European history in the seventeenth and eighteenth centuries, covering social, economic, intellectual, and political developments.

5250 Europe: The French Revolution and Napoleon. Three credits. The social, political, and economic aspects of the old regime, the French Revolution, and the Napoleonic period in European history.

5260 France Since 1870. Three credits. The social, political, intellectual, cultural, and economic history of France from the origins of the Third Republic to the present.

5270 Europe: 1815-1900. Three credits. Nineteenth-century Europe.
5280 Europe: 1900-1939. Three credits. Emphasis on the impact of continued industrialization, total war, and totalitarian ideologies in the early twentieth century.

5290 Europe Since 1939. Three credits. The major European countries and common European-wide themes from World War II to the present.

5310 Germany to 1870. Three credits. The evolution of the German states from their Indo-European origins to their unification in a single German nation in 1871 with particular emphasis on the history of German men and women since the Middle Ages. History of Austria and its possessions also included.

5320 Germany Since 1870. Three credits. The history of Germany from national unification in 1871 through its reunification in the contemporary world. Course emphasizes major social, cultural, political, intellectual, and economic developments of the period as they relate to both German men and women. History of the Austro-Hungarian empire $(1867-1918)$ and the modern Austrian state also included.

5330 Russia to the Twentieth Century. Three credits. Russian history from its beginnings to the end of the nineteenth century.

5340 Russia in the Twentieth Century. Three credits. A continuation of 5330 emphasizing the Revolution and the Soviet era.

5350 England to 1783. Three credits. English history from earliest times to the end of the American Revolution, with emphasis on major political, economic, cultural, and social developments.

5360 Britain in the Nineteenth Century. Three credits. Survey of British political, economic, diplomatic, military, and cultural developments from the end of the Napoleonic era to Gladstone's retirement in 1894.

5370 Britain in the Twentieth Century. Three credits. The political, military, imperial, economic, and social history of a changing Britain in its century of total war, imperial decline, and economic readjustment.

5410 Classical History. Three credits. Ancient Greece and Rome, from about 2,000 B.C. to A.D. 476, emphasizing the classical historians and Greek and Roman culture.

5420 The Medieval Mediterranean World. Three credits. A regional survey of political, economic, social and intellectual, and cultural development of the countries bordering the Mediterranean.

5440 The Middle East. Three credits. The development of the Near East, the rise and spread of Islam, the Ottoman Empire, European imperialism in the Near East, contemporary developments. Emphasis on cultural contributions of the Near East to western civilization.

5450 Japan. Three credits. Survey of Japanese history from the formation of the first Japanese political state to the country's emergence as a post-World War II economic superpower.

5460 China. Three credits. Survey of Chinese history from antiquity to the present People's Republic, stressing social history and the unique cultural features defining China's civilization.

5470 Canada. Three credits. Canadian history from the colonial era to the present.

5480 South America. Three credits. The development of cultural, economic, and political traditions since 1492.

5490 Mexico and the Caribbean. Three credits. The development of cultural, economic, and political traditions since 1492.

5510 Colonial Latin America. Three credits. The indigenous societies present before European colonization and the first encounters in Mexico, the Caribbean, and South America. Analysis of political structures imposed by the Spanish as well as the social and cultural implications of colonialism and miscegenation.

5520 Modern Latin America. Three credits. Examination of colonial background of Latin America, moving to an exploration of economic, political, social, and cultural developments in Latin America since independence.

5530 Latin American-United States Relations. Three credits. Relations between the United States and Latin America in the nineteenth and twentieth centuries with emphasis on the effect of cultural differences on inter-American diplomacy.

5610 History of Medicine. Three credits. Medical developments and in particular the relationship between medicine and society. Examines two medical traditions: the West and China. Discussions not only on major developments in medicine but also of the systems of healing in these cultures and comparison of the different roles medicine played within these societies. Also investigates the impact of Western scientific medicine on the various systems of traditional medicine.

5620 American Medical History. Three credits. The history of health in the United States and the changing role and perception of the medical profession from 1607 to the present.

5630 Computer and Quantitative History. Three credits. Examines quantitative reasoning in historical research. Covers historiographical questions and practical research skills. Includes historical causality, historical change over time, data preparation, sampling, and the interpretation of quantitative data.

5640 Environmental History. Three credits. Traces environmental change in America from the Puritans to the present and from wilderness to suburbia. Explains impact of growth, settlement, and resource exploitation on our national landscape and institutions.

5650 Religious Experience in America. Three credits. Explores the nature of religion as experienced in American history focusing on the questions "How has religion affected America?" and "How has America affected religion?" Emphasis on the nineteenth and twentieth centuries and on the contact of and exchanges among traditions such as Protestant-Catholic Christianity, Judasim, Islam, and Animism.

5660 American Architectural History. Three credits. An analysis of the historical development of American architecture and of architecture as evidence of America's cultural, social, economic, and technological growth from 1607 to the present.

5670 American Urban History. Three credits. A survey of the development and growth of cities and suburbs from the colonial period to the present with particular emphasis on urban institutions, problems, politics, culture, and society.

5680 History of Sport in America. Three credits. The role of sport in American society from the colonial era to the present, with emphasis on how sporting activities reflect political, cultural, and economic characteristics of various time periods.

5690 Native American History. Three credits. The North American Indian's history from the entrance into the New World until the present with emphasis on relationships among tribes, economic development, prominent personages, and adaptation to white culture.

5710 American Biography. Three credits. A survey of the lives and achievements of men and women most prominent in American history. Selected biographies and autobiographies read and analyzed.

5720 Boone's and Crockett's America. Three credits. Studies the mass movement of farm families into the interior of North America before 1860, with particular emphasis on Native American life, frontier politics, society, and culture, as well as the subsequent development of a frontier myth celebrating this migration.

5730 American Social History. Three credits. An examination of class, ethnicity, family life, and community in America from the colonial period to the present.

5740 American Cultural and Intellectual History. Three credits. Explores the major issues in American cultural and intellectual history through an examination of American literature, philosophy, social sciences, fine arts, and popular culture.

5750 African American Social and Intellectual History. Three credits. The changing role and status of African Americans in American life and the contributions to the culture and institutions of the United States.

5760 America Divided: Race, Class, and Gender. Three credits. Interaction of race, class, and gender in the lives of Americans within historical frameworks; how such interactions have shaped American social and political institutions.

5770 Women in America to 1890. Three credits. Examines women's roles in the United States from colonial times to 1890, emphasizing the experiences of women of different classes, races, and ethnic groups with work, family, and politics.

5780 Women in America Since 1890. Three credits. Examines women's roles in the United States since 1890, emphasizing the experiences of women in different classes, races, and ethnic groups with work, family, and politics.

5790 Women in Europe Since 1700. Three credits. A comparative study of the social, intellectual, cultural, political, and economic history of women's lives in Great Britain, France, Germany, and Russia since 1700.

5810 History of Women in the Third World. Three credits. Examines the connections between modern colonialism and the development of third-world feminisms. First focuses on conquest and colonialism and the consequences for third-world women of that process, then moves to postcolonial societies and expands to include women's political, economic, and social roles in the three regions of Africa, China, and Latin America.

5820 Diplomatic History of the United States to 1900. Three credits. United States foreign relations to 1900.

5830 Diplomatic History of the United States Since 1900. Three credits. United States foreign relations since 1900.

5850 Material Culture Resources in World History. Three credits. A survey of the architecture, furniture, tools, utensils, weapons, ceremonial objects, etc., of the world's major civilizations. Provides a basis for studying how various cultural styles have influenced the development of our own material culture resources.

5860 Historical Archaeology. Three credits. Introduces the disciplines of historical archaeology, including examination of archaeological evidence, historical documentation, and interpretation of evidence.

5870 Field Course in Historical Archaeology. Three credits. Prerequisite: HIST 5860 or permission of instructor. Archaeological resources and procedures and the interpretation of historical evidence undertaken at a field archaeological site.

5910 Principles of Archival Administration. Three credits. The theory, principles, and techniques employed by archivists and curators of manuscript collections. Importance of record preservation for scholars, business, government, and the public at large stressed.

5920 Development of the Local History Museum. Three credits. An overview of the development of museology, museography, and museum administration. Emphasizes approaches for identifying and solving typical problems encountered by the local history museum.

5930 Fundamentals of Historic Preservation and Cultural Resources Management. Three credits. Procedures employed by federal, state, and local agencies in the day-to-day work of locating, recording, restoring, and preserving the historical, architectural, and cultural resources of the United States.

5960 Advanced Projects in Historic Preservation. Three credits. Applied project experience in a community setting. Interested students not enrolled in the department's Historic Preservation concentration should meet with the director of the program before enrolling.

6010 Historiography. Three credits. An introduction to history's major schools of thought. Through reading, class discussion, and essays, students explore critical interpretations in American, European, and non-Western history.

6020 Historical Research Methods. Three credits. Sharpens comprehension of historical interpretation by exploring, through reading, research, and class discussion, possible alternative explanations for specific historical events and themes.

6030 Historical Readings and Criticism. Three credits. A common selection of historiographical works that raise issues common to all historians and that discuss history, historical processes, and historical-mindedness. Students will discuss these works and perhaps also write critical analyses of them.

6110/ 7110 Seminar: Colonial and Early American History to 1800. Three credits. Readings, discussion, reports, and independent study examining selected aspects of institutional and intellectual developments to 1800 .

6120/7120 Seminar: The Era of the American Revolution. Three credits. Secondary reading, discussion, and primary research on the period between the beginning of the Seven Years' War in 1756 and the death of Thomas Jefferson in 1826.

6130/ 7130 Seminar: Jacksonian America. Three credits. Exploration of a variety of social, economic, political, and cultural topics in the Jacksonian era and an analysis of the relationship between these topics and similar events abroad.

6140 Seminar: Old South. Three credits. Examines the major secondary works which have shaped our understanding of the colonial and antebellum South.

6150/ 7150 Seminar: New South. Three credits. Readings and research in aspects of the American South since 1865.

6160/ 7160 Seminar: American West. Three credits. Major developments in Western history; the leading historians of the West.

6170/ 7170 Seminar: Recent American History. Three credits. The bibliography, interpretation, and selected topics of the history of the United States since 1900.

6180/ 7180 Seminar: American Diplomatic History. Three credits. Selected topics of U.S. diplomatic history treated in depth. Conflicting scholarly interpretations are analyzed and diplomatic source materials are consulted. Formal paper required.

6190/ 7190 Seminar: State and Local History. Three credits. An intensive inquiry into sources of state and local history. Several research papers using primary materials required.

6210/ 7210 Seminar: American Social History. Three credits. Prerequisite: Instructor's permission required. Focuses on selected topics in American social history through directed readings, research, and discussion.

6230/ 7230 Seminar: American Women's History. Three credits. Focuses on selected topics in American women's history through directed readings, research, and discussion.

6240/ 7240 Seminar: African American History. Three credits. Selected topics in African American history. Emphasis on the postReconstruction period of United States history.

6250/ 7250 Seminar: American Cultural and Intellectual History. Three credits. Readings and research in selected topics from the colonial period to the present.

6260/ 7260 Seminar: American Religious History. Three credits. Specific themes in the development of religion in America explored through directed readings, research, writing, and discussion.

6310 Seminar: Medieval Europe. Three credits. A reading seminar stressing bibliography, interpretation, and methodologies for either the socio-economic, cultural-intellectual, or political-military history of the Middle Ages.

6320 Seminar: Renaissance and Reformation Europe. Three credits. A reading seminar stressing bibliography, interpretation, and methodologies for either the socio-economic, cultural-intellectual, or political-military history of the Renaissance and Reformation.

6340 Seminar: Topics in Premodern Europe. Three credits. A research seminar covering selected topics in European history before 1715 .

6350/ 7350 Seminar: Eighteenth-Century Europe. Three credits. Prerequisite: Elementary knowledge of French. The story, sources, and significance of eighteenth-century Europe from the decline of Louis XIV to the rise of Napoleon I. A combination of lectures, discussions, oral reports, and research projects.

6360/ 7360 Seminar: Nineteenth-Century Europe. Three credits. Selected topics. A research paper using primary materials required.

6370/ 7370 Seminar: Recent European History. Three credits. A combined readings and research seminar of twentieth-century Europe. The readings will be over several major topics. The research will involve thorough knowledge and use of available materials-primary and secondary-on each student-selected topic.

6380/ 7380 Seminar: The Third Reich. Three credits. Preparation for students to think critically, research competently, and write intelligently about the history of National Socialist Germany.

6390 Seminar: European Women's History. Three credits. Investigates aspects of women's lives in Europe. Countries and time periods covered selected by the instructor. Topics include women and religion, women and war, women and the family, and the impact of ethnicity, class, nationality, gender, and race on European women's lives.

6410/ 7410 Seminar: Latin America. Three credits. Selected topics in the social, economic, and political development of Latin America.

6420/ 7420 Seminar: Far East. Three credits. The bibliography interpretation and selected topics in the history of China and Japan.

6510/ 7510 Seminar: Public History. Three credits. The professional nature of public history, the interpretation of history for diverse audiences, and the application of historical methods in the wider world. Combines reading and discussion, interaction with practicing professionals, and possible experiential learning component.

6520/ 7520 Seminar: Historic Preservation. Three credits. Readings and research on selected topics related to the history, organization, and administration of historic preservation in the United States and to the use of the community as a classroom.

6530/ 7530 Seminar: Administration of Historical Organizations. Three credits. Intensive study of administrative functions, issues, and problems common to historical organizations. Combines reading and discussion, team problem-solving, and experiential learning component served in a local historical organization.

6540/ 7540 Seminar: Museum Management. Three credits. In-depth analysis of museum management issues from acquisitions and collections to curatorial care and exhibitions. Includes advanced problem-solving for museum staff and consideration of ethical issues such as repatriation of artifacts.

6550/ 7550 Seminar: American Material Culture. Three credits. Intensive study of cultural heritage resources available in the local community and methods for identifying, analyzing, and incorporating them into existing social studies and history courses.

6560/ 7560 Seminar: Cultural Resource Management. Three credits. Intensive study of cultural resource preservation planning and protection using National Park Service themes and definitions for history and prehistory. Emphasizes ethnic diversity in evaluating historic sites, linear parks, heritage trails, and national monuments.

6570 Public History Internship. Three credits. Full-time apprenticeship with a public or private historical agency or institution of regional or national significance. Internships offered during the summer months and may be paid. Enrollment limited to history students in the public history and historic preservation program.

6590 Practicum in Archival Management. Three credits. Opportunity for students interested in careers in archival management to complete an in-depth practice-based study in a specialized topic in archival management and to develop skills in project design and management under the joint supervision of MTSU faculty and staff of a sponsoring entity.

6610/ 7610 Essentials of Historic Preservation and Cultural Resources Management. Three credits. Regulatory policies and procedures employed by federal, state, and local agencies in the work of identifying, evaluating, recording, preserving, and managing the historical, architectural, and cultural resources of the United States. Emphasis on implementing the National Historic Preservation Act and the documentation requirements of the National Register of Historic Places.

6620/7620 Seminar in Archival Management. Three credits. Prerequisite: HIST 4910/5910 or equivalent. In-depth study of the nature of records and record keeping, communication and information management theory, and the seven domains of archival practice through lectures, readings, discussion, and research. Also addresses the impact of emerging technologies on archival management.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6910/ 7910 Selected Studies in American History. Three credits. Intensive reading on a carefully defined topic in American history to be selected by the student in conference with the instructor. $\mathrm{S} / \mathrm{U}$ grading.

6920/ 7920 Selected Studies in European History. Three credits. Indepth reading on a well-defined topic in European history to be selected by the student in conference with the instructor.

6990 Teaching American History Summer Institute. Three credits. Week-long session for teachers of grades 4-12 American history. Using historical scholarship and primary source materials, session is intended to enhance teachers' instruction in and knowledge of historical content by focusing on the study of a particular era in American history as determined by the 2001 Tennessee Curriculum Standards framework.

7640 Dissertation Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of dissertation. Once enrolled student should register for at least one credit hour of doctoral research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

7950/ $\mathbf{7 9 6 0}$ History Internship. One to three credits. Students given careful supervision in actual teaching experiences.

# Department of Human Sciences 

Dellmar Walker, Chair<br>Ellington Human Sciences Building 100

The Department of Human Sciences offers a Master of Science in Human Sciences with a choice of two concentrations: Child Development and Family Studies or Nutrition and Food Science.

To be considered for unconditional admission, an undergraduate grade point average (GPA) of 2.75 is required. Normally, a test score of either 800 on the Graduate Record Exam or 35 on the Miller Analogies Test is recommended. Conditional admission may be granted for students not meeting unconditional admission requirements. Students who are admitted on a temporary conditional basis will be expected to complete 9 semester hours in the Human Sciences Department with a grade of $B$ or better with 6 of the 9 hours at the 6000 level and to successfully complete a departmental admission review. Letters of recommendation may be required.


## Requirements for the Master of Science (5000 and 6000 level)

Candidate must

1. have completed an undergraduate minor in Child Development and Family Studies or Nutrition and Food Science or the equivalent;
2. complete 33 hours including H SC 6530, 6620, and a major of 18 hours with no more than 30 percent of the total degree hours dually listed as undergraduate/graduate hours:
a. a concentration in Child Development and Family Studies to include CDFS 6300 or 6310,6320 , and 6330 , or
b. a concentration in Nutrition and Food Science to include N FS 6200, 6210, and 6220 or 6230;
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours;
4. complete an approved research tool with grade of C or better (PSY 6280 or STAT 6160);
5. complete a thesis (H SC 6640);
6. successfully complete a written comprehensive exam (may be taken no more than twice);
Candidates may select a 12-hour minor with approval of the advisor as defined on page 21 of the Graduate Catalog.

## Courses in Human Sciences [H SC]

5041-Seminar in Human Sciences. Prerequisite: Permission of chair. 5044 Individual research and/or analysis of contemporary problems and issues in a concentrated area of study. For advanced students.
5041 Human Development-Family Life. Three credits.
5042 Foods-Nutrition. Three credits.
5043 Clothing-Textiles. Three credits.
5044 Housing-Design. Three credits.
5051- Advanced Problems in Human Sciences. Prerequisite: Permission
5054 of chair. Provides an opportunity for advanced students to do independent study or conduct research in their areas of concentration. One hour seminar per week plus independent study in:
5051 Human Development-Family Life. Three credits.
5052 Foods-Nutrition. Three credits.
5053 Clothing-Textiles. Three credits.
5054 Housing-Design. Three credits.
5060 Readings in Human Sciences. One to three credits. Prerequisite: Permission of chair. Selected readings of current trends, developments, and research in human sciences of interest to teachers and students. One hour seminar per week and independent study.

5410 Consumer Economics. Three credits. Consideration of theoretical economics as related to the family. An overview of the choices available and the decision-making process confronting the family in the American economy.

5420 Personal and Family Management. Three credits. Management theories applied to personal and family resources throughout the life cycle. Emphasis on the development of knowledge from which to draw conclusions about the financial elements of life. Offered once a year.

5430 Resource Management. Three credits. Opportunity to coordinate the many areas of human sciences in the solution of individual and group management problems.

5450 Professionalism in Consumer Services. Three credits. The roles, functions, and responsibilities of consumer services professionals employed in business, government, and other organizations.

6500 Issues and Trends in Human Sciences. One to three credits. An in-depth analysis of one or more current issues or trends in human sciences. Topics will vary.

6520 Public Policy on Consumer and Family Issues. Three credits. The ideological roots, impact, and effectiveness of family policy Family well-being in the areas of health, child care, care of the elderly and disabled, and poverty examined in relation to the development of public policy.

6530 Effective Program Management. Three credits. Integration of human sciences concepts and content with the principles of program management, including planning, organization, staffing, implementation, and evaluation.

6620 Research Methods in Human Sciences. Three credits. Introduction to methods and tools of research. Selection and statement of research problems, formulation of research proposal.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

## Courses in Textiles, Merchandising, and Design [TXMD]

5130 History of Costume. Three credits. Survey of clothing and design from ancient to modern times; consideration given to social, economic, and cultural conditions reflected in dress.

5170 Social Aspects of Clothing. Three credits. Principles of sociology and psychology applied to the study of clothing behavior. Research methods for studying socio-psychological aspects of clothing included. Offered once a year.

## Courses in Nutrition and Food Science [N FS]

5200 Diet and Disease. Three credits. Prerequisites: BIOL 2030 N FS 4270. Nutritional problems in disease and modifications of normal diet to meet dietary requirements of pathological conditions. Offered once a year.

5210 Nutrition in Aging. Three credits. Prerequisite: N FS 1240 or 2220. Nutritional needs of elderly individuals and how these requirements are affected by physiological, pathological, and socioeconomic changes associated with aging. Emphasis on assessment, nutrition counseling skills, and resources to assist elderly individuals with adequate nutrient intake. Offered once a year.

5220 Food Systems Management I. Three credits. Prerequisite: N FS 3200 or 3210 or permission of instructor. Principles and production of quantity foods. Emphasis on types of food service systems, delivery systems, menu planning and evaluation, procurement, receiving, quality control, inventory, cost containment, safety, and sanitation. Five hours per week.

5240 Experimental Food Study. Three credits. Prerequisites: N FS 3200 and CHEM 2030 or permission of instructor. Chemical and physical factors affecting the flavor, texture, color, and appearance of food. Emphasis on evaluation of sensory qualities
of food using subjective and objective measurements and new food product development. Offered once per year.

5250 Child Nutrition. Three credits. Prerequisite: N FS 1240 or 2220. Nutritional needs during pregnancy, infancy, and childhood related to physical and mental development. Emphasis on cultural, social, and psychological aspects of the development of food patterns and nutrition education resources.

5260 Food Safety Issues from Production to Consumption. Three credits. Food safety issues that impact food production, food storage and transportation, food processing, and food consumption within food production facilities, the home, and food service facilities. Consumer concerns evaluated based on risk theory and scientific evaluation of safety, including decision-making through critical thinking. Food standards and regulations designed to improve safety of food also discussed.

5270 Advanced Nutrition. Three credits. Prerequisite: N FS 1240 or 2220. Nutrient utilization, cellular metabolism, and nutritional status assessment. Participation includes seminar presentation on a current issue in nutrition. Offered once a year.

5280 Food Systems Management II. Three credits. Functions of management applied to food service industry. Emphasis on systems approach to food service operation, organizational structure, personnel management, leadership and management styles, work improvement, and labor relations. Offered once a year.

5290 Dietetic Practicum. Six credits. Prerequisites: N FS 4200 and 4220. Practical preparation in clinical dietetics. Clinical experience provided with the cooperation of Middle Tennessee Medical Center and other facilities. For dietetics students only. Offered summer only.

5800 Diet and Disease Seminar. One credit. To be taken concurrently with N FS 5200. Nutrition and Food Science majors only. Practice in applying the knowledge base acquired in N FS 5200 to structured case studies and development of the critical thinking skills needed to design accurate and systematic nutrition care plans in the clinical setting.

6200 Metabolism of Carbohydrates, Lipids, and Proteins. Three credits. Prerequisite: CHEM 3530 or equivalent. Sequential to N FS 5270 or equivalent. Advanced study of carbohydrates, lipids, and proteins with emphasis on the metabolic interactions at the cellular, tissue, and organ levels. Offered alternate years.

6210 Vitamin and Mineral Metabolism. Three credits. Prerequisite: CHEM 3530 or equivalent. Sequential to N FS 5270 or equivalent. Metabolic functions and mechanisms of micronutrient action in human nutrition with an emphasis on physiological requirements, assessment techniques, and interrelationships in disease prevention. Offered alternate years.

6220 Food Industry Applied Nutrition. Three credits. Integration of food technological considerations, nutrition attributes, consumer perceptions, and socio-demographic influences to determine food choice, and thus diet quality.

6230 Advanced Clinical Nutrition. Three credits. Sequential to N FS 5200 and 5270. Integration of the principles of basic biological diseases in the pathogenesis, diagnosis, and management of the nutritional aspects of disease including nutritional assessment and dietary implication in the etiology of disease.

6290 Clinical Dietetics. Six credits. Planned educational experiences in administration of food service systems and experiences in a
health care facility applying principles of normal and clinical nutrition to nutritional problems occurring throughout the life cycle.

## Courses in Child Development and Family Studies [CDFS]

5140 Violence in the Family. Three credits. (Same as SOC 5140.) Causes, dynamics, and consequences of violence in the family. Includes the discussion of violence toward children, spouses, dating partners, siblings, and elders. Emphasizes the social conditions which lead to these types of violence.

5300 Nursery School Practicum. Three credits. Prerequisites: CDFS 2350, 3310, 4370 or permission of instructor. Advanced information and skills working with three- and four-year-olds. Lab interaction with children; planning and implementation of curriculum. Three-hour laboratory plus two-hour seminar per week.

5330 Primary Practicum. Three credits. Prerequisites: CDFS 4300, 4380; ELED 3050; admission to teacher education. Advanced knowledge and skills in working with kindergarten and primary age students. Consists of field experiences in the appropriate development and implementation of curriculum in kindergarten and one other primary grade. Three-hour laboratory and two-hour seminar per week.

5340 The Contemporary Family. Three credits. Prerequisite: CDFS 3320 or permission of instructor. An ecological approach to the study of contemporary issues, problems, questions, and lifestyles as they relate to families and individuals.

5350 Parenting. Three credits. Developing knowledge and understanding of parenting and parent/child interaction theories. Examination and development of parent education programs.

5360 Day Care Perspectives. Three credits. Prerequisites: CDFS 2350 and 3310 or permission of instructor. Examination of diverse day care settings and their influence on human development. Emphasis on the organization/administration of day care programs. Participation in day care center experiences required. Three hours plus one hour observation per week.

5370 Effective Instruction (Birth - $\mathbf{5}$ years). Three credits. Prerequisites: CDFS 2350, 3310, or permission of instructor. A comprehensive exploration of the knowledge and skills necessary for designing and implementing curricula appropriate for programs serving children birth to five years.

5380 Infant/Toddler Practicum. Three credits. Prerequisites: CDFS 2350, 3310, and 4370/5370 or permission of instructor. Advanced information and skills in working with infants and toddlers (birth to three years). Lab participation involving interactions with children as well as planning and implementing curriculum required. Three-hour laboratory and a two-hour seminar per week.

5390 Families in Later Life. Three credits. Prerequisite: Human Sciences majors - CDFS 3320; Sociology majors - SOC 2600; or permission of the instructor. Examination of families in later life from an ecological approach with emphasis on family forms and relationships.

5391 Aging Health and Development. Three credits. Prerequisite: CDFS 4390 or SOC 2600 or permission of the instructor. A service learning opportunity that seeks to provide students with understanding of the concepts and application of aging, families in later life, assessment, and gerontological program planning and implementation.

6300 Application of Child Development Principles I. Three credits. A comprehensive exploration of human growth and development from conception to age six. Recognizing and assessing developmental ages and stages as well as special needs is an integral part of this course.

6310 Application of Child Development Principles II. Three credits. Prerequisite: CDFS 6300 or equivalent. Advanced study of the child from the age of six through adolescence from a holistic perspective.

6320 Families at Risk. Three credits. Prerequisite: CDFS 3320 or permission of the instructor. The dynamics, context, and overall impact of factors which place families at risk. Methods by which family members cope with normative and/or catastrophic stressor events analyzed from a variety of theoretical perspectives.

6330 Theories of Child Development and Family Relations. Three credits. The advanced study of individual and family theory, as well as theory principles and evaluation criteria.

## Courses in Family and Consumer Sciences Education [FCSE]

5501- Occupational Field Experience. Three credits each. Prerequi-
5502 site: Consent of instructor. Directed participation in planned and supervised occupational experiences of eight hours field experience per week. Must apply previous semester.
5501 Care and Guidance of Children. Three credits.
5502 Food Management, Production, and Services. Three credits.

5540 Teaching Home Economics. One to six credits. Synthesis and application of relevant concepts relating to educational planning; changes relating to the development of effective home economics education programs. A maximum of six semester hours credit may be applied toward a degree.

5550 Curriculum Development. Three credits. Review of recent advances in home economics education. Analysis and evaluation of selected topics, materials, and methods in terms of their appropriateness for reaching curriculum objectives in home economics.

5560 Problems in Teaching Materials. One to three credits. Prerequisite: Permission of chair. Application of principles and techniques involved in the selection and preparation of effective teaching materials and visual aids.

5570 Occupational Home Economics Seminar. Three credits. Prerequisite: Consent of instructor. Examination and analysis of program development, execution, and evaluation in a selected occupational area.

## Courses in Interior Design [IDES]

5700 History of Interiors. Three credits. Historical interiors: survey analysis, application. Emphasis on major design characteristics of interior furnishing styles. Offered once a year.

5710 Survey of Contemporary Interior Design. Three credits. Prerequisite: IDES 4700/5700 or consent of instructor. Development of contemporary interiors from the early nineteenth century to the present with consideration given to style characteristics, cultural influences, designers, and relationships among styles. Offered once a year.

# Department of Management and Marketing 

Jill Austin, Chair<br>Business and Aerospace Building N121D

The Department of Management and Marketing offers courses in management and marketing in the Master of Business Administration degree. The associate dean for graduate and executive education serves as advisor for the Master of Business Administration (page 69).

## Courses in Management [MGMT]

## General Management [MGMT]

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

6000 Management and Operations Concepts. Three credits. Concepts of the management functions of planning, organizing, leading, and controlling as applied to managing people in organizations. Production and operations management concepts with emphasis on using quantitative models for decision making. Prerequisite for M.B.A. program. May not be used for elective credit in graduate business degree program.

6600 Study of Organizations. Three credits. Prerequisite: MGMT 3610 or 6000 . Behavioral science concepts and research in the management of organizations; theories dealing with interpersonal relationships, motivation systems, group dynamics, communications, and authority related to organizational behavior, control, and structure problems.

6660 Seminar in Organization Development. Three credits. Prerequisite: MGMT 3610 or 6000. Diagnostic approaches for effecting planned changes in organizations. Emphasis on the individual and personal development of the student to be more effective in managing change and innovation.

6670 Seminar in Management. Three credits. Prerequisite: MGMT 3610 or 6000 . In-depth study of current developments in management theory and practice. An evaluation of contemporary thought on managerial roles in modern conglomerates and a comparative analysis of these roles in specialized organizations and across variations in national and international operative environments. Recent methodology in management and organization studies.

6730 International Supply Chain Management. Three credits. Prerequisite: MGMT 3620 or 6000 . Principles of supply chain man-
agement and supply chain management environments. Examines integration with other companies to manage flow of resources, including materials, information, people, etc., in a global supply chain environment.

6740 Leadership and Motivation. Three credits. Prerequisite: MGMT 3610 or 6000. Issues in leadership and motivation in business organizations. An examination of the theoretical framework for leadership and motivation processes serves as foundation. Emphasis on practical issues and applications of leadership development and motivation.

6750 Business Ethics. Three credits. Prerequisite: MGMT 3610 or 6000. Impact of individual values and ethics on the management of organizations. Topics include legal and ethical aspects of dealing with organization stakeholders: stockholders, consumers, employees, and the general community. Emphasis on using ethical theory to make good business decisions.

6770 International Management. Three credits. Prerequisites: MGMT 3610 or 6000 and MKT 3820 or 6000 . Major issues associated with the formulation and implementation of corporate strategy for international and global operations. Emphasis on the understanding of global environmental forces surrounding international business operations and the management issues facing global organizations.

6780 Health Care Management. Three credits. Prerequisite: MGMT 3610 or 6000 . An overview of the U.S. health care system, including managed care, governmental and private sector programs and policies affecting the delivery of health care (e.g. Medicare, Medicaid, and private health insurance), and legal, ethical, and budgeting issues relevant to managing health care organizations. Presents strategic and operational considerations unique to the management of health care organizations.

6790 Problems in Management. Three credits. Prerequisite: 21 graduate hours and/or approval of department chair. Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of an approved faculty member

## Human Resources [MGMT]

6510 Current Problems in Human Resource Management and Industrial Relations. Three credits. Prerequisite: MGMT 3610 or 6000. Investigation of current problems. Emphasis on current theory, problems, and practices in the public and private sector. Consideration of legal and political environment stressed as related to management policy formulation.

6680 Seminar in Human Resources Management. Three credits. Prerequisite: MGMT 3610 or 6000 . Focus on the responsibility of all managers with respect to the effective development of human resources. The responsibility of all functional areas in the human resource department or impinging forces such as technology, organized labor, and government legislation examined along with the emerging concepts, problems, and theories supported by research in the field.

## Operations [MGMT]

6650 Operations Management. Three credits. Prerequisite: MGMT 3620 or 6000. Strategic and tactical decisions involved with planning, operating, and controlling the operations functions in a firm. Emphasis on problem identification and solution.

6700 Production and Operations Management Strategy. Three credits. Prerequisite: MGMT 3620 or 6000 . Focuses on operations strategy concepts and operations management as a competitive weapon. Topics include global production and operations management strategy, capacity of facilities, vertical integration, performance controls, and the importance of manufacturing for overall business strategy.

6760 Total Quality Management. Three credits. Prerequisites: MGMT 3610 and 3620 or 6000 . Examination of the major total quality management philosophies; consideration of implementation issues; quality costs, off- and on-line tools and techniques; vendor certification.

## Courses in Marketing [MKT]

5840 Study Abroad. Three credits. Prerequisites: Graduate standing and completion of core courses in respective field as determined by graduate business studies. A short-term international business education experience designed to expose the student to the economic, political, cultural, and social environments of a foreign country(ies), with specific emphasis directed toward the international state/status of the subject matter pertinent to the discipline.

6000 Marketing Concepts. Two credits. A survey of the functions, processes, and institutions involved in the creation, promotion, pricing, and distribution of consumer and industrial goods and services with an emphasis on the decision-making process. May not be used for elective credit in graduate business degree program.

6800 Marketing Management. Three credits. Prerequisite: MKT 3820 or 6000. An analytical managerial approach to the marketing activities of a business enterprise. Emphasis on problem solving and marketing simulation.

6810 Promotional Strategy. Three credits. Prerequisite: MKT 3820 or 6000. Promotional goals, plans, and concepts in marketing; the role of marketing communication in society; the organization, budgeting, and scheduling of promotion; innovation and the adoption process; managerial decision making in the promotional mix.

6820 Market Behavior. Three credits. Prerequisite: MKT 3820 or 6000. Behavioral science concepts and applied research relating to the process of buyer behavior. Topics include cognition, motivation, personality, group influence, social class, culture, and behavior models.

6830 Marketing Systems Three credits. Prerequisite: MKT 3820 or 6000. An analytic, decision-oriented study of marketing channels. Problems of integrating relevant variables within the marketing system to achieve optimum returns for all members.

6840 Marketing Seminar: Current Topics in Marketing. Three credits. Prerequisite: MKT 3820 or 6000 . Theoretical bases of marketing concepts, principles, and strategies; the development, acceptance, and possible future direction of emerging concepts and practices.

6850 International Marketing Seminar. Three credits. Prerequisite: MKT 3820 or 6000 . Difference in market arrangements and in legal, cultural, and economic factors in different countries. Planning and organizing for international marketing operations, forecasting, and analyses; interrelationships with other functions; strategy of product pricing, promotion, and channels.

6860 Marketing Research and Decision Making. Three credits. Prerequisite: MKT 3820 or 6000 . Investigates research methods for providing marketing information to assist managers in making better decisions, particularly in identifying marketing opportunities and problems. Specifically focuses on understanding both primary and secondary research processes and developing an ability to evaluate primary and secondary sources of information.

6870 Electronic Commerce and Direct Marketing. Three credits. Prerequisite: MKT 3820 or 6000. Channels used in direct marketing with an emphasis on electronic commerce; strategic differences among the channels of direct marketing and the managerial implications of each. The impact of changing technology, regulations, and privacy issues.

6890 Problems in Marketing. Three credits. Prerequisites: MKT 6000 or 3820 and approval of department chair. Individual research and analysis of contemporary problems and issues in a concentrated area of study under the guidance of an approved graduate faculty member. Not approved or substituted for core requirements. Approval of supervisory faculty member and department chair must be obtained in writing before student will be allowed to register for independent study.

6900 Health Care Marketing. Three credits. Prerequisite: MKT 3820 or 6000 . The role of marketing in the delivery of health care services. Topics include the history of health care in the United States, the evolution of marketing in health care, marketing strategy and implementation in health care, and the future of health care marketing. Students will apply marketing concepts and theory to practical situations.

## Course in Business Administration [B AD]

6980 Business Policy. Three credits. Advanced problem analysis requiring the synthesis of theory and practice gained from both the functional and managerial areas of study with emphasis on formulation, integration, and implementation of policies and strategies of the firm. This is a capstone course and must be taken after all core requirements or by consent of the director of the M.B.A. program in the last semester prior to graduation.


## Mass

## Communication

## Director of Graduate Studies <br> Bragg Mass Communication 249

The College of Mass Communication offers the Master of Science degree in Mass Communication; students are advised through the School of Journalism. A graduate minor in Mass Communication is also offered. Normally, a score of 900 on the verbal and quantitative portions of the Graduate Record Examination is required for admission to the degree program.
Once accepted into the College of Graduate Studies, students interested in the graduate program in Mass Communication may take up to 9 credit hours (3 courses) before being admitted to the program. However, two of those first three courses MUST be M C 6000 and 6010. ALL students in the Mass Communication graduate program must take M C 6000 and 6010 among their first three courses. All other courses in the program require permission of the graduate director before enrolling.

## Requirements for the Master of Science

The degree is designed for media professionals in fields such as advertising, electronic media, journalism, public relations, publishing, or recording industries seeking to broaden their understanding of the field of mass communication and to develop research and management skills relevant to decision making in media-related organizations. It is also appropriate for those who wish to pursue the doctoral degree.
Students may choose from two options organized around (1) the thesis/professional project or (2) the comprehensive examination.
The thesis/project option is designed for the student seeking to concentrate studies in a particular area and to experience in-depth independent research. This option has 12 hours of core courses, 12 hours of limited choice electives, 6 hours of free electives, and the capstone thesis or project (6 hours). The thesis results in the production of traditional academic research; the professional project results in the application of research knowledge to a professional production or other project.
The examination option is designed for the working person who is integrating graduate education and professional life and for the traditional student seeking a broad conceptual grounding in mass communication. The examination option has 21 hours of required courses, 9 hours of limited choice electives, 3 hours of general electives, a 3 -hour capstone course, and the comprehensive examination.

## Thesis and Project Options

## Candidate must

1. have earned 18 credits in the social sciences (anthropology, economics, history, political science, psychology, sociology).
2. provide evidence of a minimum of one year of full-time professional experience in a media-related position. In exceptional cases, a student without sufficient professional experience may be admitted on the condition he or she completes an approved program of skills courses and/or an internship in a mass communication field.
3. complete 36 semester hours as follows:

## Required courses:

M C 6000 The Science of Communication
M C 6010 Cultural Studies in Communication
M C 6110 Quantitative Research Methods (required research tool)
M C 6120 Qualitative Research Methods (required research tool)
M C 6640 Thesis Research ( 6 hours) OR
M C 6650 Professional Project (6 hours)
Two of the following courses:
MC 6200 Media Management
M C 6230 Media in the Marketplace
MC 6250 Media Organizations
At least two of the following:
M C 6300 Media Law and Ethics
MC 6320 Mass Media and Public Opinion
M C 6350 Cultural Studies in Popular Music
M C 6380 News, Culture, and Democracy
MC 6400 Communication and Technology
6 hours of approved electives (taken inside or outside the College of Mass Communication as benefits research orientation and no more than three credits can be taken at the 5000 level).
4. file a Candidacy Form with the Graduate Office before the completion of 24 hours.
5. submit and defend an acceptable thesis or project.

## Exam Option

Candidate must

1. have earned 18 credits in the social sciences (anthropology, economics, history, political science, psychology, sociology).
2. provide evidence of a minimum of one year of full-time professional experience in a media-related position. In exceptional cases, students without sufficient professional experience may be admitted on the condition he or she completes an approved program of skills courses and/or an internship in a mass communication field.
3. complete 36 semester hours as follows:

## Required courses:

M C 6000 The Science of Communication
M C 6010 Cultural Studies in Communication
M C 6110 Quantitative Research Methods (required research tool)
M C 6120 Qualitative Research Methods (required research tool)
M C 6200 Media Management
M C 6230 Media in the Marketplace
MC 6250 Media Organizations
M C 6590 Case Studies in Media Management OR
M C 6600 Seminar in Applied Research

## At least three of the following:

MC 6300 Media Law and Ethics
MC 6320 Mass Media and Public Opinion
M C 6350 Cultural Studies in Popular Music
M C 6380 News, Culture, and Democracy
M C 6400 Communication and Technology
3 hours general elective.
4. file a Candidacy Form with the Graduate Office before the completion of 24 hours.
5. pass a written comprehensive examination.

## Courses in Mass Communication [M C]

6000 The Science of Communication. Three credits. Quantitative and qualitative research dealing with the uses and effects of mass communication.

6010 Cultural Studies in Communication. Three credits. Relationship of communication to culture with particular emphasis on the everyday life contexts of media audiences.

6100 Research Design. Three credits. Prerequisite: Permission of graduate director. Formulating research questions, developing operational definitions, selecting measures. Analysis of surveys, observational techniques, and interpretive studies.

6110 Quantitative Research Methods. Three credits. Prerequisite: MC 6000. Techniques of communication research emphasizing survey and experimental methods. Sampling, questionnaire construction, data gathering, and statistical methods.

6120 Qualitative Research Methods. Three credits. Pre-requisite: MC 6010. Techniques of communication research emphasizing participant observation, ethnography, and focus groups. Interviewing, observation, problems of generalization, ethics of fieldwork.

6200 Media Management. Three credits. Prerequisite: Permission of graduate director. Application of the case study method to understanding the role of management and managers in the delivery of media to the marketplace. Application of management and organization theory to the problems of the mass media.

6230 Media in the Marketplace. Three credits. Prerequisite: Permission of graduate director. The use of various forms of audience research in media organizations. Social and ethical conflicts related to marketing.

6250 Media Organizations. Three credits. Prerequisite: Permission of graduate director. An examination of the structure of media organizations. Roles of creators, producers, distributors, publics, institutional frameworks.

6300 Media Law and Ethics. Three credits. Prerequisite: Permission of graduate director. An overview of the laws relating to the media. Ethical and social dimensions of law. Emphasis on case studies.

6320 Mass Media and Public Opinion. Three credits. Prerequisite: MC 6000. Theories of democracy, the nature of a "public" and of "public opinion." Readings in the classics on mass media and democracy and in public opinion research.

6350 Cultural Studies in Popular Music. Three credits. Prerequisite: MC 6010. Relationship of popular music to society with attention to institutional, textual, and audience studies.

6380 News, Culture, and Democracy. Three credits. Prerequisite: MC 6010. Critical examination of the news process with attention to the relationship of economic, cultural, and political constraints.

6400 Communication and Technology. Three credits. Prerequisite: Permission of graduate director. Readings in the cultural history of media technology explore technological change and social development as a system of interrelated social relations and practices.

6430 Special Topics in Communication. Three credits. Prerequisite: Permission of graduate director. An in-depth analysis of one or more current issues or sub-disciplines. Topics will vary from semester to semester.

6590 Case Studies in Media Management. Three credits. Prerequisite: Permission of graduate director. A capstone course that emphasizes the integration of communication theory and method with management philosophy in the planning of strategy for media organizations. Emphasis on case studies and student presentations. Requires consent of director of graduate studies or instructor.

6600 Seminar in Applied Research. Three credits. Prerequisite: Permission of graduate director. A capstone course that emphasizes the application of various research methodologies to decision making in media organizations.

6610 Directed Reading and Research. Three credits. Completion and execution of a research project under the direction of a faculty advisor. P/F grading.

6640 Thesis Research. One to six credits. Under the direction of a faculty advisor and graduate committee, the student will plan and execute an original research or creative project. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

6650 Professional Project. One to six credits. Completion and execution of a professional project under the direction of a faculty advisor and graduate committee. Once enrolled, student should register for at least one credit hour of master's project each semester until graduation. $\mathrm{S} / \mathrm{U}$ grading.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

# Department of Mathematical Sciences 

Michaele F. Chappell, Interim Chair Kirksey Old Main 223D

The Department of Mathematical Sciences offers the Master of Science with a major in Mathematics, the Master of Science in Teaching with a major in Mathematics, and a minor in Mathematics at the graduate level.
Three concentrations are offered under the Master of Science: General Mathematics, Industrial Mathematics, and Research Preparation. Two concentrations are offered under the Master of Science in Teaching: Middle Grade Mathematics and Secondary Mathematics.
Admission to either master's program normally requires an expected GRE score of 900 or an MAT score of 44 .

## Requirements for the Master of Science in Mathematics

The Master of Science in Mathematics requires a core of 9 hours plus 18 hours of specified courses in the department and a 9 -hour cognate of supporting courses. Every candidate is required to declare a concentration selected from General Mathematics, Industrial Mathematics, or Research Preparation.
All candidates must

1. have completed an undergraduate prerequisite of at least 21 hours of college-level mathematics including calculus; any deficiency should be removed during the first year of study.
2. complete 36 hours including the core ( 9 hours), a concentration ( 18 hours), and a cognate area ( 9 hours).
3. complete at least 30 hours at the graduate level with at least 21 hours at the 6000 level.
4. participate in the graduate seminar and give an oral presentation of an approved topic.
5. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
6. successfully complete a written comprehensive examination (may be taken no more than twice).

## M.S. Core

Each candidate for the Master of Science in Mathematics must complete the following core ( 9 hours):
MATH 6120 Advanced Linear Algebra
MATH 6170 Sets and Logic
MATH 6190 Analysis I

## Concentration: General Mathematics

Students desiring a broad background in mathematics should pursue this concentration. In addition to the core, students must complete the concentration and a cognate as outlined below.

## Concentration

Eighteen (18) hours from approved courses in mathematical sciences, including at least one course from each of three different groups:
Algebra/Number Theory: MATH 5420, 5530, 6140, 6510
Analysis: MATH 6141, 6200, 6210, 6250
Combinatorics/Graph Theory: MATH 5700, 6700
Geometry/Topology: MATH 5270, 6400, 6142
Industrial Mathematics: MATH 5310, 5320, 6260, 6270, 6300, 6310
Cognate
Nine (9) additional hours approved by advisor
The master's thesis is an option in this concentration.

## Concentration: Industrial Mathematics

Students interested in positions in industry or further graduate work in applied mathematics should pursue this concentration. In addition to the core, students must complete the concentration and a cognate as outlined below.

## Concentration

Eighteen (18) hours including MATH 5310, 5320, 6260, and 6270 plus two from MATH 6210, 6300, 6310, 6400, 6410, 6700, or STAT 6160, 6180.

## Cognate

Nine (9) additional hours chosen from the above list; MATH 6640, and/or courses from relevant disciplines approved by advisor.
The master's thesis is an option in this concentration.

## Concentration: Research Preparation

Students wishing to pursue the Ph.D. in mathematics should choose this concentration. In addition to the core, students must complete the concentration and a cognate as outlined below.

## Concentration

Eighteen (18) hours including MATH 5270, 5530, 5700, 6200, 6140, and 6210 .

Cognate
Nine (9) hours including MATH 6640 and six (6) additional hours approved by advisor.

## Requirements for the Master of Science in Teaching

This degree should be pursued by students interested in teaching. Admission is open to those licensed as teachers as well as those seeking initial licensure.

Candidates seeking initial licensure must meet the major requirements listed below, satisfy a professional education component, and meet discipline-related requirements. The candidate should contact the chair of the Department of Educational Leadership for the professional education component and the chair of the Department of Mathematical Sciences for the discipline-related requirements.

The Master of Science in Teaching requires the M.S.T. core of 9 hours plus 15 hours of specified courses in the department and a 12 -hour cognate in professional education. Every candidate is required to declare a concentration in either Middle Grade or Secondary Mathematics.

All candidates must

1. complete 36 hours including the core ( 9 hours), a concentration ( 15 hours), and a cognate ( 12 hours).
2. complete at least 30 hours at the graduate level with at least 21 hours at the 6000 level.
3. file a Candidacy Form with the Graduate College prior to the completion of 24 hours credit.
4. successfully complete a comprehensive examination (may be taken no more than twice).

## M.S.T. Core

Each candidate for the Master of Science in Teaching in Mathematics must complete the following core ( 9 hours):
MATH 6320 Mathematical Problem Solving
MATH 6380 Current Trends in Mathematics Education
MATH 6900 Research in Mathematics Education

## Concentration: Middle Grade Mathematics Admission Requirements:

A candidate for admission to the Master of Science in Teaching program with a concentration in Middle Grade Mathematics must

1. hold a valid elementary teaching certificate.
2. have one year teaching experience.
3. submit three letters of recommendation.
4. have an acceptable GRE or MAT score. (A GRE of 900 or an MAT of 44 is expected.)
Any applicant not meeting these requirements may petition to the Mathematics Education Graduate Admissions Committee.

## Degree Requirements:

In addition to the core, students must complete the concentration and cognate as outlined below.

## Concentration

Fifteen (15) hours selected from MATH 5620, 6100, 6330, 6340, 6350 and other courses in the department selected in consultation with advisor.

## Cognate

Twelve (12) hours in the College of Education and Behavioral Science (determined jointly by the Departments of Mathematical Sciences, Educational Leadership, and Elementary and Special Education).

## Concentration: Secondary Mathematics Admission Requirements

A candidate for admission to the Master of Science in Teaching program with a concentration in Secondary Mathematics must

1. hold a valid secondary mathematics teaching certificate, or have completed 9 hours of mathematics past the calculus sequence.*
2. have one year teaching or related work experience.
3. submit three letters of recommendation.
4. have an acceptable GRE or MAT score. (A GRE of 900 or an MAT of 44 is expected.)

Any applicant not meeting these requirements may petition to the Mathematics Education Graduate Admissions Committee.
*NOTE: Candidates seeking initial licensure may be required to complete additional hours in mathematics and/or professional education. (An advisor should be consulted.)

## Degree Requirements

In addition to the core, students must complete the concentration and cognate as outlined below.

## Concentration

Fifteen (15) hours including STAT 5190, MATH 6170, and three other courses from the department selected in consultation with advisor.

## Cognate

Twelve (12) hours in the College of Education and Behavioral Science (determined jointly by the Departments of Mathematical Sciences and Educational Leadership).

## Courses in Mathematics [MATH]

5010 Concepts of Mathematics. Three credits. Recommended for students preparing to become elementary school teachers. Topics include complex numbers, finite mathematical systems, linear equations and inequalities, functions and their graphs, introductory matrix algebra, interest and consumer credit, and microcomputer applications in the mathematics classroom.

5200 Introduction to Mathematics of Investment. Three credits. (Same as ACSI 5200.)

5270 Introduction to Topology. Three credits. Prerequisites: MATH 3110 and a previous upper-division course in which the student has been required to write proofs. Fundamental concepts of topology including continuity, compactness, connectedness, separation axioms, and metric spaces.

5310/ 5320 Numerical Analysis I and II. Three credits each. Prerequisite: CSCI 3180 or equivalent. Application of computer-oriented numerical algorithms to algebraic equations, differential and integral equations, and linear algebra. Rigorous mathematical treatment of error included.

5420 Number Theory. Three credits. Divisibility congruences, quadratic residues, Diophantine equations, quadratic forms, and continued fractions.

5470 Introduction to Modern Algebra. Three credits. A treatment of sets, relations, operations, and the construction of number systems in algebra.

5510 Abstract Algebra I. Three credits. Groups with a brief introduction to rings, integral domains, and fields.

5530 Abstract Algebra II. Three credits. Prerequisite: MATH 4510/ 5510. Theory of rings, fields, integral domains, matrices, and vector spaces.

5600 Problems in Contemporary Mathematics. One to six credits. Pass/Fail grading in specified sections.

5620 History and Philosophy of Mathematics. Three credits. Prerequisites: Background in geometry, number theory, and/or symbolic logic helpful. The character of mathematical thought by way of mathematical problems which have occupied successively the outstanding mathematicians of Babylon, Egypt, Greece, China, the Renaissance, and modern times paralleled with a
study of three schools of mathematical philosophy: intuitionism, logicism, and formalism. Open only to senior and graduate mathematics majors.

5700 Combinatorics and Graph Theory. Three credits. Prerequisite: MATH 2010 or 3080. Selected topics in combinatorics and graph theory emphasizing combinatorial problem solving and algorithmic proof.

6100 Mathematics for Teachers. Three credits. Mathematics as problem solving, communication, and reasoning. Connecting different fields of mathematics. Topics include number and number relationships, number systems and number theory, computation and estimation, patterns and functions, statistics and probability, algebra, geometry, measurement.

6120 Advanced Linear Algebra. Three credits. Prerequisite: MATH 2010. Continuation of linear algebra topics in MATH 2010 including advanced topics in inner product spaces and structure of linear operators.

6140 Selected Topics of Modern Mathematics: Algebra. Three credits. Prerequisite: MATH 5530 or consent of instructor. Extension of previous work in algebra with emphasis on topics not treated in other courses.

6141 Selected Topics of Modern Mathematics: Analysis. Three credits. Prerequisite: MATH 6200 or consent of instructor. Extension of previous work in analysis with emphasis on topics not treated in other courses.

6142 Selected Topics of Modern Mathematics: Topology. Three credits. Prerequisite: MATH 4270/5270 or consent of instructor. Extension of previous work in topology with emphasis on topics not treated in other courses.

6170 Sets and Logic. Three credits. Includes topics in three categories: 1) Propositions, predicates, quantifiers, truth tables, tautologies, and methods of mathematical proof including mathematical induction. 2) Sets, relations, functions, graphs, cardinality, and the Axiom of Choice. 3) Applications of these foundations to selected results in algebra and analysis as time permits. It is recommended that this course be taken early in the graduate program.

6190 Analysis I. Three credits. Prerequisite: MATH 4250 or equivalent. Rigorous treatment of limits, continuity, differentiation, and integration in n-dimensional Euclidean space; infinite series; introduction to metric spaces.

6200 Analysis II. Three credits. Prerequisite: MATH 6190 or equivalent. A continuation of MATH 6190. Lebesgue measure, Lebesgue integral, functions of bounded variation.

6210 Complex Variables. Three credits. Prerequisite: MATH 6190. Theory of functions of complex variables and their application in mathematics and physics.

6230 Teaching of Introductory College Mathematics. Three credits. Foundations and pertinent topics in college algebra, trigonometry, analytic geometry, and calculus with emphasis on techniques of presentation.

6250 Real Analysis. Three credits. Prerequisite: MATH 6200. A continuation of MATH 6200. Advanced topics in real analysis. Abstract measure and integration theory. Introduction to functional analysis.

6260 Advanced Differential Equations I. Three credits. Prerequisites: MATH 3120 and 4250. Qualitative and quantitative analysis of systems of differential equations. Gradient systems, SturmLiouville problems. Elementary techniques for boundary value problems of partial differential equations.

6270 Advanced Differential Equations II. Three credits. Prerequisite: MATH 6260. Solution techniques for boundary value problems. Problems involve heat, wave, and potential equations. Topics include the method of characteristics, series solutions, integral transforms, and Green's functions.

6300 Optimization. Three credits. Prerequisite: MATH 5320 or consent of instructor. Constrained and unconstrained optimization problems, including the generalized least squares problem and Eigenvalue problems. Methods include orthogonalization, conjugate gradient, and quasi-Newton algorithms.

6310 Control Theory. Three credits. Prerequisite: MATH 6260 or consent of instructor. Vector space applications to system analysis; observability, controllability, and stabilization of systems; feedback systems; Lyapunov methods; optimal control, and the calculus variations.

6320 Mathematical Problem Solving. Three credits. Prerequisite: Permission of instructor. A basis for reflection on teaching and learning mathematics. Problem-solving strategies and heuristics. Focuses on all branches of mathematics, providing an opportunity to synthesize mathematical knowledge.

6330 Algebra for Teachers. Three credits. Prerequisite: Permission of instructor. Review and extension of algebraic skills and concepts as they relate to the teaching and learning of algebra. Focus on algebraic thinking and problem solving, algebraic systems, functions, graphing, and linear algebra.

6340 Geometry for Teachers. Three credits. Prerequisite: Permission of instructor. Investigations into the foundations of plane, solid, and coordinate geometry, motion geometry, similarities and congruencies, measurement and the application of geometry. Instruction will model the suggested pedagogy appropriate for school mathematics.

6350 Probability and Statistics for Teachers. Three credits. Prerequisite: Permission of instructor. Relation to school mathematics. Development of central tendency and variation, concepts of chance including sample space, randomness, conditional probability, and independence.

6360 Technology Tools for School Mathematics. Three credits. Integrates technology into the teaching and learning process for teachers of middle and secondary school mathematics. Investigates a variety of mathematical subject matter appropriate for middle and secondary school students via technology. Lessons designed for use with a variety of technologies, including graphing calculators, dynamic geometry software, spreadsheets, authoring software, presentation software, and the World Wide Web. Highly individualized due to varying backgrounds and interests of students.

6380 Current Trends in Mathematics Education. Three credits. Prerequisite: Permission of instructor. Innovative topics or critical issues related to the teaching and learning of mathematics. Includes history of mathematics education, pedagogical content knowledge, assessment and evaluation, and technologies.

6400 Advanced Geometry. Three credits. Prerequisite: MATH 3070 or consent of instructor. Detailed study of one or more of the
various branches of geometry including non-Euclidean geometry, projective geometry, algebraic geometry, and differential geometry.

6410 Computer-Aided Geometric Design. Three credits. Prerequisites: MATH 5320 and 6400 or consent of instructor. Parametric curves and surfaces; Bezier and B-spline interpolation and approximation techniques; visual smoothness and parameterization for curves; Coons, Bezier, and triangular patches; scattered data methods.

6510 Advanced Algebra. Three credits. Prerequisite: MATH 5530. Polynomial rings, theory of fields, vector spaces and intermediate group theory necessary for Galois theory, and Galois theory.

6601- Problems in Mathematics. One to nine credits (in 6601-6608).
6608 Prerequisite: Mathematical maturity, preparation in the area, and normally nine semester hours of graduate study. Problems course dealing with theory methods and applications.
6601 Advanced Calculus
6602 Number Theory
6603 Mathematics of Finance
6604 Mathematics of Life Contingencies
6605 Numerical Analysis
6606 Topology
6607 Abstract Algebra
6608 Combinatorics and Graph Theory
6610 Introduction to Graduate Study. Two credits.
6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6700 Advanced Combinatorics and Graph Theory. Three credits. Prerequisite: MATH 4700/5700. Selected topics in combinatorics and graph theory extending topics studied in MATH 4700/ 5700.

6900 Research in Mathematics Education. Three credits. Prerequisite: Permission of instructor. An examination of factors influencing research and critical analyses of selected research in mathematics education. Studies representing different methodologies critiqued.

6999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7060 Independent Study. One to nine credits.

## Courses in Statistics [STAT]

5130 Applied Statistics. Three credits. Prerequisite: 2 years of high school algebra or equivalent. Topics include descriptive statistics, probability, and statistical inference. The inference unit covers means proportions and variances for one and two samples, one-way ANOVA, regression and correlation analysis, chi-square analysis, and topics in nonparametrics.

5140 Probabilistic and Statistical Reasoning. Three credits. Prerequisite: STAT 5130 or equivalent. Topics include multiple regres-
sion, variance component estimation, experimental design, covariate analysis, chi-square analysis, multiple comparisons, and nonparametrics. The experimental design topics include twoway ANOVA, factorial experiments, nested designs, and split plot designs.

5190 Mathematical Statistics II. Three credits. Prerequisite: STAT 3150 or equivalent. Theory of statistical inference. Topics include sampling distributions, decision theory, estimation, test of hypothesis, regression analysis, analysis of variance, and selected applications.

5200 Statistical Methods for Forecasting. Three credits. Prerequisite: STAT 4190. Application of the regression model in forecasting regression and exponential smoothing methods to forecast nonseasonal time-series, seasonal series and globally constant seasonal models, stochastic time series models; and forecast evaluation. (Prepares actuarial science students for the Society of Actuaries Exam \#120 and Exam Part 3A administered by the Casualty Actuarial Society.)

5320 Probability and Stochastic Processes. Three credits. Prerequisite: Two semesters of calculus and STAT 3150 (or MATH 2050) or consent of instructor. Theoretical basis for stochastic processes and use as models of real-world phenomena. Topics include Markov chains, Poisson processes, and Brownian motion and stationary processes. Applications include Gambler's Ruin, birth and death models, hitting times, stock option pricing, and the Black-Scholes model.

5360 Regression Analysis. Three credits. Prerequisite: STAT 3150 or equivalent. Theory and application of regression models. Approaches to model building and data analysis treated. Computation and interpretation of results facilitated through use of statistical software packages.

5370 Nonparametric Statistics. Three credits. Prerequisite: STAT 3150 or equivalent. Statistical tests that require no assertions about parameters or about the form of the population from which the samples are drawn. A wide range of practical problems.

5380 Experimental Design. Three credits. Prerequisite: STAT 3150 or equivalent. Topics include one-way analysis of variance, multiple comparison, multifactor analysis of variance, and various practical issues in experimental design. Computation and interpretation of results are facilitated through the use of statistical software packages.

5600 Problems in Statistics. One to six credits. Prerequisites: Senior standing and consent of instructor. Students wishing to enroll must submit a written course/topic proposal to the department prior to the semester in which STAT 5600 is taken. Proposal must be approved prior to student taking the course. At the conclusion of the course, each enrollee must submit a written report to the department.

6020 Introduction to Biostatistics. One credit. Prerequisite: Introductory probability/statistics course or permission of instructor. Descriptive and inferential statistics for biostatistics including parametric and nonparametric hypothesis testing methods, sample size, statistical significance and power, survival curve analysis, relative risk, and odds ratios. Data will be analyzed using statistical software.

6160 Statistics. Three credits. Mathematical statistics and applications, discrete and continuous data, statistical inferences.

6180 Statistical Inference. Three credits. Prerequisite: STAT 6160 or permission of instructor. Theory of estimation and hypothesis
tests. Topics include minimum variance unbiased estimation, methods of estimation, most powerful tests, likelihood ratio tests, decision theory, and sequential test procedures.

6510 Biostatistical Methods. Three credits. Prerequisites: STAT 6020 and 6160 or permission of instructor. Biostatistical methods focusing on the design and analysis of clinical trials and sample surveys. Topics include clinical trial designs and phases, bias, random error, sample size, power, estimating clinical effects, design-based methods of data analysis from sample surveys, sampling techniques, nonresponse, and sampling frame issues.

6520 Advanced Biostatistical Methods. Three credits. Prerequisites: STAT 6020 and 6160 or permission of instructor. Mathematically rigorous presentation of categorical data analysis methods for univariate and correlated multivariate responses including contingency table analysis, logistic regression, and loglinear models; survival analysis for analyzing time-to-event data including survivor functions, Kaplan-Meier curves, and Cox proportional hazards model; and other health applications of multivariate analysis methods.

6600- Problems in Statistics. One to nine credits (in 6601-6604). 6604 Prerequisite: Mathematical maturity, preparation in the area and (normally) nine semester hours of graduate study. Problems course dealing with theory, methods, and applications.
6601 Mathematical Statistics
6602 Regression Analysis
6603 Nonparametric Statistics
6604 Experimental Design

## Courses in Actuarial Science [ACSI]

5140 Mathematical Foundations of Actuarial Science. Three credits. Prerequisites: ACSI/MATH 3020 (or MATH 3110) and STAT 3150 or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 1. Integrates calculus, probability, and risk management topics into fundamental tools for assessing risk in an actuarial environment. Calculus and probability topics include derivatives, integrals, partials, random variables, distributions, and conditional probability. Risk topics include frequency and severity. Insurance concepts such as retention, deductible, coinsurance, and risk premium.

5200 Introduction to Mathematics of Investment. Three credits. (Same as MATH 5200.) Prerequisites: MATH 1910 or ACSI 2020, 2030, and one semester of probability/statistics, or consent of instructor. Calculus and probability/statistics used to model and analyze investments in bonds, treasury bills, stocks, and other derivatives. Topics include obtaining the price of a bond as a function of interest rate, developing formulas for duration and convexity to study the sensitivity of price to interest rate, and mathematical modeling of investor preference and attitude toward risk.

5220 Mathematics of Pricing Theory. Three credits. Prerequisites: ACSI/MATH 4200/5200 and ECON 2410, 2420, or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 2. Applies calculus and theory of interest tools to intermediate topics in microeconomics. Topics include the mathematics of supply, demand, and equilibrium; prices, costs, and the gains from trade; consumer behavior; elasticities; competition; monopoly; market power, collusion, and oligopoly; the mathematics of risk and uncertainty; and surplus economics.

5230 Mathematics of Compound Interest. Three credits. Prerequisite: ACSI/MATH 4200/5200 or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 2. Topics include measurement of interest (including accumulating and present value factors), annuities certain, yield rates, amortization schedules, sinking funds, and bonds and related securities.

5240 Mathematics of Interest Theory, Economics and Finance. Three credits. Prerequisites: ACSI 4230/5230 or consent of instructor. A preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 2. Applies calculus and theory of interest tools to intermediate topics in microeconomics and macroeconomics and topics in finance. Topics include pricing activities, the simplified Keynesian model, interest and discount rates, valuation of payment streams, yield rates, amortization, cash flows and internal rate of return, stock and bond valuation, portfolio risks, the Capital Asset Pricing Model (CAPM), efficient markets, capital structure, leverage, financial performance measurement, and basic option pricing and the Black-Scholes model.

5330 Actuarial Mathematics I. Three credits. Prerequisites: ACSI 4230/5230 and STAT 4190 or consent of instructor. First of a two-semester sequence; a preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 3. Topics include survival distributions and life tables, life insurance, life annuities, and net premiums.

5340 Actuarial Mathematics II. Three credits. Prerequisite: ACSI 4230/5230 and STAT 4190 or consent of instructor. Second of a two-semester sequence; a preparatory course for the Society of Actuaries/Casualty Actuarial Society Course/Exam 3. Topics chosen from net premium reserves, multiple life functions, multiple decrement models, valuation theory and pension plans, and insurance models (including expenses and nonforfeiture benefits and dividends).

5600 Problems in Actuarial Science. One to six credits. Prerequisites: Consent of instructor. Students wishing to enroll must submit a written course/topic proposal to the department prior to the semester in which ACSI 5600 is taken. The proposal must be approved prior to student taking the course. At the conclusion of this course, each enrollee must submit a written report to the department.

5630 Mathematics of Risk Management. Three credits. Prerequisite: ACSI/MATH 4200/5200. A preparatory course for the Society of Actuaries Course 6. Topics include mathematical modeling of volatility; pricing of bonds, stocks, and other derivatives with uncertainty; benchmark portfolios; asset/liability management for property/casualty insurers; liability associated with a financially distressed company. Heath-Jarrow-Morton and Cox-Ingersoll-Ross models studied.

5640 Mathematics of Options, Futures, and Other Derivatives. Three credits. Prerequisites: ACSI/MATH 4630/5630 and 4200/ 5200. A preparatory course for the Society of Actuaries Course 6. Topics include risk management using options, interest rate swaps, interest rate caps, Black-Scholes analysis, Taylor series expansion to obtain hedge parameters, portfolio insurance, numerical procedures, interest rate derivatives, and use of Black's model.

6010 Credibility Theory and Loss Distributions. Three credits. Prerequisite: STAT 5190 or consent of instructor. A preparatory course for Exam Part 4B of the Casualty Actuarial Society. Topics include Bayes Theorem and its relationship to credibility theory and analysis of statistical distributions for modeling insurance claims by size.

## Department of Physics and Astronomy

## Robert F. Carlton, Chair <br> Wiser-Patten Science Building 219

The Department of Physics and Astronomy offers a minor at the graduate level.

## Courses in Physics [PHYS]

Graduate standing and consent of instructor are prerequisites for graduate courses in physics.

5310 Electricity and Magnetism. Three credits. Topics including electric and magnetic fields, electrostatic potential, and potential energy and fields in matter discussed in a mathematically rigorous manner. A variety of good applications of mathematical methods in physics.

5380 Introduction to Quantum Mechanics. Three credits. Origin of quantum theory; wave packets and deBroglie waves; Heisenberg uncertainty principles. Schroedinger wave equation, operators, eigenfunctions, square well potential, the harmonic oscillator, the hydrogen atom, molecular binding and molecular spectra.

6330 Principles of Modern Physics. Three credits. Charged particles and their behaviors; electronic structures of the atoms; nuclear structures and processes; and radiation.

6340 Fundamentals of Physics. Six credits. Basic laws and principles of classical and modern physics. Lecture topics and laboratory experiences designed to advance student's knowledge of physics.


# Department of Political Science 

John R. Vile, Chair<br>Peck Hall 209

Byrnes, Carleton, Franklin, Korobkov, Langenbach, Livingston, Maynor, McDaniel, Perez-Reilly, Sloan, Tesi, Vernardakis, Willis

Courses in the Department of Political Science meet the needs of many students: those interested in public service, private business, or professional careers; those who wish to go to law school; those interested in international relations and foreign service employment in the public or private sector; and those interested in teaching government and social studies in secondary schools.
To accommodate these needs and interests within the objectives of liberal education, the department offers programs leading to the Bachelor of Arts and Bachelor of Science. The major areas and appropriate degrees follow:

1. a Political Science major (B.A. or B.S.) with either a a. general focus or
b. Public Administration concentration or
c. Pre-law concentration;
2. an International Relations major (B.S.).

Minors are offered in Political Science, International Relations, and Public Administration. Interdisciplinary minors in Urban Studies, Russian Studies, and Paralegal Studies are coordinated by the department.
All students at the University must fulfill the General Education requirements. These courses are primarily in the fields of English, history, science, and mathematics. Following are suggested curricula, but students should study the requirements carefully and consult with their advisors on those courses.
Curricular listings include General Education requirements in Communication, History, Humanities and/or Fine Arts, Mathematics, Natural Sciences, and Social/Behavioral Sciences categories as outlined on pages 60-63.

## Major in Political Science

The major in Political Science requires 33 semester hours of work, including P S 1010, 2010, 4000, and 4800.* All majors must include work in at least five of the following groups:

1. American government (P S 2020, 3050, 3060, 3100, 3160, 3320, 3330, 3350, 3400, 4120, 4250, 4360, 4410)
2. Comparative government (P S 3000, 3180, 3190, 3200, 3300, 3310, 3770, 3900)
3. International relations (P S 2130, 3000, 3210, 3220, 3500, 3510, 3780, 3910, 4126, 4220, 4240, 4250)
4. Public law (P S 2440, 3010, 3370, 3380, 3500, 3530, 4040, 4590)
5. Public administration (P S 3250, 3260, 3400, 3440, 4050, 4290, 4630)
6. Political theory and research methods (P S 4020, 4110, 4230, 4700, 4920)
*Those with a Pre-law concentration must take P S 1010, 2010, 4800, and two of the four following courses: P S 4000, 4230, 4700, 4920. Those with no concentration must take one of the following courses: PS 4230, 4700, 4920.

## Recommended Curriculum

## FRESHMAN

ENGL 1010, 1020 (Comm)

## SOPHOMORE

COMM 2200 (Comm)
ENGL 2020 or 2030 or
HUM 2610 (Hum/FA) 3 Mathematics

Humanities and/or Fine Arts (2 prefixes)
P S 1010 (Soc/Beh Sci)
Social/Behavioral Sciences
HIST 2010, 2020, or 2030
P S 2010
P S area requirements
Foreign Language/Minor
Natural Sciences (2 prefixes)
Foreign Language/Minor*
32

## JUNIOR

PS area requirements
P S 4000
Minors

## SENIOR

P S 4230, 4700, or 49203
P S 4800
Electives
PS area requirements
Minors
Electives
*Students pursuing the B.S. degree rather than the B.A. degree should take a second minor.

## Concentration: Public Administration

The Public Administration concentration is for those seeking administrative careers in government or public service agencies. A combination of general political science courses, core public administration courses, pertinent political science electives, and courses in related disciplines provides a sound background for an administrative career. Included in the major must be some work in five of the six political science subfields. Required courses are P S 1010, 2010, 4000, 4800 (general); P S 3250, 4290 (core); nine semester hours from PS 2020, 3160, 3260, 3400, 3440, 4050, 4590, 4630 (core); and six or more semester hours of coursework in political science relevant to public administration and the student's interests. In addition the student must complete INFS 3100 and ECON 2410, 2420. ACTG 2110, 2120 are recommended. Recommended minors include Accounting, Business Administration, Criminal Justice Administration, Economics, Finance, English, Information Systems, Psychology, and Sociology.

## Recommended Curriculum <br> FRESHMAN

ENGL 1010, 1020 (Comm) COMM 2200 (Comm) Mathematics
P S 1010 (Soc/Beh Sci) P S 2010
Natural Sciences (2 prefixes)
Foreign Language/Minor

## SOPHOMORE

6 ENGL 2020 or 2030 or HUM 2610 (Hum/FA)
Humanities and/or Fine Arts (2 prefixes)
ECON 2410 (Soc/Beh Sci)
ECON 2420
HIST 2010, 2020, or 20306
P S 3250
Foreign Language/Minor

| JUNIOR |  | SENIOR |  |
| :--- | ---: | :--- | ---: |
| INFS 3100 | 3 | P S 4800 | 3 |
| P S 4000 | 3 | P S 4290 | 3 |
| P S designated courses | 6 | P S | 9 |
| Minors | 12 | Minors | 12 |
| ACTG 2110, 2120 | 6 | Elective | 1 |
|  | $\mathbf{3 0}$ |  | $\mathbf{2 8}$ |

## Concentration: Pre-law

The Pre-law concentration is designed for the student who plans to attend law school. A combination of core political science courses and courses in related disciplines has been found to provide a sound background for law school. Some law schools will not accept any professional or technical courses as part of their minimum requirement. It is essential that the student consult with his or her advisor in instances where such courses will be taken. In addition to meeting the basic requirements for the Political Science major, the Prelaw student must enroll in ECON 2410 (or 2420); PHIL 2110; COMM 3210 (or 2200); and P S 3530 (or ENGL 3500); ACTG 3000 or BLAW 3400; and one upper-division P S law class.

Recommended Curriculum

## FRESHMAN

ENGL 1010, 1020 (Comm)
COMM 2200 (Comm)
Mathematics
P S 1010 (Soc/Beh Sci)
P S 2010
Natural Sciences (2 prefixes)
Foreign Language/Minor

JUNIOR
P S 3370, 3380
ENGL 3500 or P S 3530
ACTG 3000 or BLAW 3400
P S 4800
Minors
PS area requirement

## SOPHOMORE

| NGL 2020 or 2030 or HUM 2610 (Hum/FA) | 3 |
| :---: | :---: |
| Humanities and/or Fine Arts (2 prefixes) |  |
| ECON 2410 (Soc/Beh Sci) or ECON 2420 | 3 |
| HIST 2010, 2020, or 2030 | 6 |
| P S 2440 | 3 |
| PHIL 2110 | 3 |
| Foreign Language/Minor | 6 |
|  | 30 |

## SENIOR

P S Political Theory 6
P S cognate course 3
Minors 12
P S area requirement 3
Electives 4
2. Comparative Government (P S 3180, 3200, 3190, 3300, 3310, 3770, 3780, 3790, and 3900)
3. The remaining six hours may be drawn from any of the courses listed above or from P S 4000, 4200, 4230, 4800, and 4920.
Substitutions may be made with the advisor's consent.
It is preferable that minors and electives be in foreign languages, humanities, or social science offerings that significantly contribute to an understanding of economic, geographical, historical, and cultural factors in international relations or in areas that provide students with substantive skills related to a professional environment such as business and computer science. Recommended related courses in social science are ANTH 2010; ECON 2140, 4440, 4470; GEOG 3420, 3430, 3460, 4330, 4500; HIST 3150, 4530, 4330, 4340; SOC 4510, 4520. Interdisciplinary minors with a crosscultural or area studies emphasis are also recommended.

## Recommended Curriculum <br> FRESHMAN

ENGL 1010, 1020 (Comm)
COMM 2200 (Comm) Mathematics
P S 1010 (Soc/Beh Sci)
P S 2010
Natural Sciences (2 prefixes)
Minor

## SOPHOMORE

ENGL 2020 or 2030 or HUM 2610 (Hum/FA)
Humanities and/or Fine Arts (2 prefixes)

## JUNIOR

P S subfields (IR/Comp)
P S designated course
Minor
Electives

## Minor in International Relations

The minor in International Relations requires 18 semester hours from P S 1010, 2010, 3000, 3180, 3190, 3210, 3220, 3300, 3310, 3500, 3510, 3770, 3780, 3790, 3900, 3910, 4126, 4200, 4220, 4240, 4920. P S 1010, 2010, and 3210 are mandatory.

## Major or Minor in Political Science with Teacher Licensure

Students who want to teach government in high school should minor in Secondary Education; complete 12 hours of history (may include General Education requirements); minor in History (highly recommended), Economics, or Geography; and take 33 hours in political science. These should include the political science core curriculum (P S 1010, 2010, 4000, 4800, and either P S 4230, 4700, or 4920), either P S 3210 or 4220 (International Relations), and 18 elective hours with at least one course in three of four specified areas-American Government, Public Law, Public Administration, and Comparative Government. Students must also complete additional teacher licensure requirements including COMM 2200 and either HIST 1010, 1020, 1110, or 1120.

Students with teacher licensure in History, Geography, and Economics who are seeking an add-on endorsement in Government must take P S 1010, 2010, 2440, 3210 or 3300, 2020 or 4120 , and an upper-division class in political theory for a total of 18 hours. Students without licensure in History, Geography, and Economics who are seeking an add-on endorsement in Government must take the classes above plus 3 additional hours of political science (a total of 21 hours).
NOTE: The Secondary Education minor has been revised. Please see page 193 and contact the Educational Leadership Department for information.

## Interdisciplinary Minors

Interdisciplinary minors are open to all students in the University. The Department of Political Science coordinates the interdisciplinary minors in Urban Studies, Paralegal Studies, and Russian Studies. See Interdisciplinary Minors beginning on page 76 .

## Courses in Political Science [P S]

Courses marked with an * are offered only in alternate years.
1010 Foundations of Government. Three credits. Meets part of the General Education Social/Behavioral Sciences requirement. Comparative theories and institutions of government. Law, constitutions, power, political socialization, ideologies, and the media.

2010 American Government and Politics. Three credits. Constitutional principles, functions, and administration of American federal government; Congress, the Presidency, and the Supreme Court. A General Education Social/Behavioral Sciences course.

2020 State and Local Government. Three credits. Prerequisite: P S 2010. Politics and administration at the state and local level. Legislative, judicial, and administrative structures and processes; major issues and problems.

2100 Legal Courtroom Procedure. One credit. For students interested in developing trial advocacy skills; practical course offering preparation for mock trial competition. May be repeated for up to four hours credit. Pass/Fail.

2105 Introduction to Latin American Studies. Three credits. (Same as SPAN 2105, SOC 2105, ART 2105, ANTH 2105, GEOG 2105.) A multidisciplinary, team-taught introduction to Latin America. Covers the cultures and societies of the region: prehistory, history, geography, politics, art, languages, and literatures. Required course for all Latin American Studies minors.

2120 Mediation Procedure. One credit. Prerequisite: P S 2440 or permission of department chair. For students interested in developing skills as mediators and advocates in mediation settings. Practical application of theories, methods, and ethical components of mediation. Participation in intercollegiate mediation competition. May be repeated for up to four hours of credit. Pass/Fail.

2130 Model United Nations/Crisis Simulation. One credit. For students interested in developing skills in negotiation and conflict resolution involving international issues. A practical application of negotiating skills, policy process, and understanding of inter-
national conflicts and problems through participation in intercollegiate MUN/crisis simulation competition. Course may be repeated for up to 4 hours of credit.

2440 Law and the Legal System. Three credits. Prerequisite: P S 2010. A general introduction to American law and the American legal system; focus on the case system.

3000 The Political Status of Women in the World. Three credits. Prerequisite: P S 1010 or 2010 or WMST 2100. Considers both developed and developing countries. Emphasizes ferment and change in the twentieth century in terms of emergent concepts of equality; highlights effects of religion, economy, culture, and psychological behavior on the politics of male-female relationships.

3010 Women and the Law. Three credits. Prerequisite: P S 1010 or 2010 or permission of the department chair. Analysis of the legal treatment of women in the home, school, and workplace. Examines development of law, relationship of law to political movements, and current state of law and legal theory on women's rights and gender equality.

3050 The U.S. Presidency. Three credits. Prerequisite: P S 1010 or permission of instructor. A comprehensive analysis of the presidency; includes origins of the presidency, political power, the nature of the institutionalized presidency, campaigns and elections, and a careful look at selected presidents.

3060 The U.S. Congress. Three credits. Prerequisite: P S 2010. An analysis of the United States Congress; its origins, political power, the nature of the institutionalized Congress, campaigns, and elections.

3100 Politics and Film. Three credits. Prerequisite: P S 1010 or 2010 or permission of instructor. Analysis of political ideas as expressed in motion pictures. Topics include leadership, political biographies, campaigns and elections, ideology, and war.

3160 American Public Policy. Three credits. Prerequisite: P S 1010 or 2010. Examines the public policy-making process in the United States, the stages of policy development and the problems inherent in policy making. At least one substantive policy area examined in depth; examples: health care, environmental, welfare, agricultural, poverty, or budgetary policies.

3180 African Politics. Three credits. (Same as AAS 3180.) Prerequisite: P S 1010. Comparative study of the political systems, modernization efforts, and development problems of countries with different traditions or colonial pasts, selected from the continent of Africa.

3190 Middle East Politics. Three credits. Prerequisite: P S 1010. Emphasis on the Palestinian question, the Arab-Israeli wars, the role of the United Nations; conflicts between and among the Arab nations; the various peace initiatives that have been proposed.

3200 British Government and Films. Three credits. Prerequisite: P S 1010 or 2010 or permission of instructor. The evolution of parliamentary government in the United Kingdom and its current distinctive characteristics, processes, and functions in contrast to other parliamentary regimes.

3210 International Relations. Three credits. Prerequisite: P S 1010. The state system and national power, balance of power, balance of terror, game theory, psychological aspects of international conflict, decision making, diplomacy and negotiation, war, disarmament, and collective security.

3220 International and Comparative Politics in Theory and Practice. Three credits. Prerequisites: P S 1010 and 3210. A reading and discussion seminar; theoretical approaches to studying international relations and comparative politics. Offers preparation for upper-division international relations and comparative politics courses; helps in choice of career goals.

3250 Public Administration. Three credits. Prerequisite: P S 1010 or 2010. Fundamentals of public management-organization theory, leadership, policy making, planning, budgeting, personnel, administrative law, bureaucratic behavior.

3260 Applied Public Administration. Three credits. Prerequisite: P S 3250 or permission of instructor. Emphasizes selected issues, agencies, and problems. Normally entails the application of administrative concepts to administrative problems and learning by doing.

3300 Comparative European Governments. Three credits. Prerequisite: P S 1010. Comparative analysis of the governmental forms and practices of England, France, Germany, the European community, and others.

3310 Comparative Asian Governments. Three credits. Prerequisite: P S 1010. Comparative analysis of the governmental forms and practices of China, Japan, and India.

3320 Public Opinion. Three credits. Prerequisite: P S 1010 or 2010. The nature of public opinion and its role in the political and social process. How opinion is shaped, created, and measured.

3330 Political Parties. Three credits. Prerequisite: P S 1010 or 2010. The nature of democracy, politics, and political parties; party organization and role in government; campaigning; primaries, conventions, general elections; the Electoral College; voting behavior and pressure groups.

3340 Political Campaign Management. Three credits. Prerequisite: P S 1010 or 2010 or permission of instructor. An analysis of applied politics; how to plan and manage a modern political campaign. Readings, discussions, and hands-on projects; students will learn the strategies, tactics, and varied techniques of political campaigning.

3350 Interest Groups and Social Change. Three credits. Prerequisite: Upper-level standing required. Examines role of interest groups in American politics and the policy-making process, including the role of lobbyists, money, and politics, and case studies of several specific interest groups.

3370, 3380 American Constitutional Law. Three credits. Prerequisite: P S 2010; P S 2440 recommended. The Supreme Court as a policy-making body in the governmental system. Emphasis on case studies in major areas of conflict including federalism, civil liberties, criminal procedure, and economic regulation.

3400 Municipal Government. Three credits. Prerequisite: P S 1010 or 2010. Powers, functions, and politics of municipal governments from the standpoint of city management. Attention is given to problems related to the execution of municipal policy.*

3420 African American Politics. Three credits. Prerequisite: P S 2010 or permission of instructor. The unique history, content, and form of African American political participation; examines the nature of consequences of African American influence within, or exclusion from, the workings of various American political institutions; the nature and types of issues that influence contemporary discussions in American and African American politics related to the socioeconomic conditions of African Americans.

Students who have taken P S 4390 Special Topics (Black Politics in America) may not take P S 3420 for credit.

3440 Governmental Budgeting and Finance Administration. Three credits. Prerequisite: P S 1010 or 2010; P S 3250 recommended. Analysis of the legal and social nature of government budgets emphasizing the procedures and administrative methods of fiscal control. Budget documents at state and local levels.*

3490 Alternative Dispute Resolution. Three credits. Prerequisite: P S 2440 or permission of the department chair. Theory, methods, and ethical components of alternative dispute resolution (ADR); emphasis on various forms of mediation, but including other ADR formats such as arbitration, negotiation, and summary jury trial.

3500 International Law. Three credits. Prerequisite: P S 1010 or 2010. General principles of modern international law taught by the case study method in a seminar format encouraging debate and discussion. Issues concerning the development of international law and human rights will be studied.

3510 International Political Economy. Three credits. Prerequisites: $P$ S 1010 and 3210 or permission of instructor. The relation between politics and economics in international affairs and its implications for global peace, security, ecology, and social welfare.

3530 Legal Writing and Research. Three credits. Prerequisite: Junior status. A specialized composition course for the student planning to attend law school or paralegal school or to become a legal secretary. Practice in legal research, documentation, and a variety of legal problems.

3770 The Former Soviet Union. Three credits. Prerequisite: P S 1010. In-depth study of the development, nature, and future of the nations of the former Soviet Union.

3780 Study Abroad. Three or six credits. Prerequisite: P S 1010 or permission of instructor. Supervised study in a foreign country; familiarizes students with foreign cultures and political systems. Three to six hour classes may be repeated once if country of destination varies. No more than 6 hours may count toward a political science major. Pass/Fail.

3790 Eastern European Politics. Three credits. Prerequisite: P S 1010. Comparative study of Eastern Europe states and societies. Emphasis on post-Communist transition, democratization, and interethnic relations.

3900 Latin American Politics. Three credits. Prerequisite: P S 1010. Emphasis on the comparative analysis of structures, functions, and aspects of Latin American political cultures and systems.

3910 International Organization. Three credits. Prerequisite: P S 1010; P S 3210 recommended. Development and prospects of the United Nations Organization and its major approaches to peace-pacific settlement, collective security, international law, arms control, trusteeship, preventive diplomacy, international conferences, functionalism.*

4000 Quantitative Methods of Research. Three credits. Prerequisite: 9 hours of political science. Fundamentals of quantitative methods in empirical research problems in the social sciences.

4020 Political Science Laboratory. Three credits. Prerequisite: P S 4000 or permission of instructor. Studies of a research, statistical, data processing, or simulation nature as related to political and social questions.

4040 Pre-Law Internship. Three credits. Prerequisites: Senior standing, competitive selection, P S 2440, or by permission of instructor. Familiarizes pre-law students with general law office procedures and an active law environment.

4050 Introduction to City and Regional Planning. Three credits. Prerequisite: P S 1010 or 2010; P S 2020 recommended. Analysis of the basis of particular forms in urban settlements and regions; introduction to planning history, theory, methods, processes, and current trends.

4110 Quantitative Methods of Research. Three credits. Prerequisite: P S 4000. Intermediate quantitative methods.

4120 Tennessee Government. Three credits. Prerequisite: P S 2010; P S 2020 recommended. Structure, functions, and processes of Tennessee's governmental and political institutions. Policy issues studied.

4126 Contemporary Issues in World Affairs. Three credits. Prerequisite: P S 1010; P S 3210 recommended or permission of instructor. Issue oriented; explores and analyzes the leading issues facing the international community and actions that various actors in world politics have employed to deal with the issues and with what results.

4200 Problems in Government. Three credits. Prerequisites: P S 1010 or 2010 and at least 12 hours of P S classes. Work done under the close direction of a professor on a tutorial basis. Student expected to present a sound proposal for departmental consideration and acceptance before enrolling in this course.

4220 World Politics. Three credits. Prerequisite: P S 1010; 3210 recommended. Experiencing contemporary international politics through the medium of simulation. Particular focus areas include the U.S., F.S.U., People's Republic of China, the Middle East, South Asia, and Southern Africa.

4230 Classical Political Theory. Three credits. Prerequisite: P S 1010 or 2010 . Western political theory from the ancient Greeks through the medieval Christians. Includes Sophocles, Aristophanes, Plato, Aristotle, stoicism, skepticism, Lucretius, Augustine, Thomas Aquinas, Thomas More.

4240 American Foreign Policy. Three credits. Prerequisite: P S 1010 or 2010; P S 3210 recommended. Foreign policies in the nuclear age from Kennan and Containment to the present with particular emphasis on contemporary problems and policies.

4250 U.S. National Security Policy. Three credits. Prerequisite: P S 1010 or 2010; P S 3210 recommended. The concept of national security, nature of the U.S. security experience, decisionmaking process, policy-making process, threats to security, and analysis of specific policy areas such as military and strategic doctrines, force postures, arms control, and budgetary decisions.

4270 Political Campaign Internship. One to six credits. Prerequisites: Sophomore standing, P S 2010, and a 2.50 minimum GPA. Students work for a political campaign as an employee under the joint administration of the campaign and the department. Only six hours may count toward a political science major and three hours toward a political science minor. Arrangement for this course must be made in advance. Pass/Fail.

4280 The Washington Experience. Twelve credits. A cooperative program with the Washington Center that provides for student service with a governmental office in Washington, D.C., on a full-
time basis during the fall or spring semester. On-the-job training will be supplemented with lectures and other activities. Students selected on a competitive basis. Only six hours count toward a Political Science major.

4290 Public Service Internship. Three to twelve credits. Prerequisites: Junior standing and 2.50 minimum GPA. Student assigned to a public service agency as an employee under the joint administration of the agency and the department. Only six hours may count toward a political science major and three hours toward a political science minor. Arrangement for this course must be made in advance. Pass-Fail course.

4360 Legislative Internship. Twelve credits. A cooperative program with the State of Tennessee that provides for student service with the legislature on a full-time basis during the spring semester. Students selected on a competitive basis. Only six hours may count toward a Political Science major.

4390 Special Topics in Political Science. Three credits. Prerequisite: P S 1010 or 2010 or permission of the instructor. An in-depth study of a special topic significant in contemporary political developments or political science literature. May be taken more than once, as topics change, with up to six credit hours applied to a Political Science major.

4410 American Political Economy. Three credits. Prerequisite: P S 1010 or 2010. Interaction of politics and economics in the United States. Three primary topics: (1) the connection between the American political system and U.S. economic goals and performance; (2) the relationship between the American state and private economic interests in determining American economic and business policies; (3) the politics surrounding the major current economic issues facing America.

4590 Administrative Law. Three credits. Prerequisite: P S 2010; P S 3250 recommended. Procedural aspects, substantive issues, judicial review of the type of law concerned with the powers and procedures of government agencies and the rights of citizens affected by them.

4630 Personnel Management. Three credits. Prerequisite: P S 3250 or permission of instructor. Human resources administration in government agencies. Patterns of position classification, compensation, recruitment, selection, training, performance appraisal, promotion, discipline, separation, collective bargaining.*

4700 American Political Thought. Three credits. Prerequisite: P S 2010. Major thinkers and movements in American political thought from colonial times to the twentieth century with special emphasis on the thoughts of the framers of the American Constitution and their contemporaries.

4800 Senior Seminar. Three credits. Prerequisites: P S 1010, 2010, and senior standing. A reading and discussion seminar in which each of the seven subdisciplinary areas of political science is looked at to broaden the major's knowledge of the scope and literature of the discipline.

4920 Modern Political Theory. Three credits. Prerequisite: P S 1010 or 2010. Western political theory from the Renaissance to the twentieth century. Includes Machiavelli, Hobbes, Locke, Rousseau, J. S. Mill, Marx and Engels, Kierkegaard, Nietzsche, facism, existentialism, Strauss, Arendt, and contemporary thought.

Courses marked with an * are offered only in alternate years.

## Courses in Paralegal Studies [PLEG]

3010 Litigation. Three credits. Prerequisites: P S 2010 and 2440. Legal procedures required for introducing and pursuing cases in the judicial system.

3410 Family Law. Three credits. Prerequisites: P S 2010 and 2440. The law of marriage, divorce, child custody and support, adoption, paternity, and related issues.

3420 Torts. Three credits. Prerequisites: P S 2010 and 2440. The law of injury to legally protected interests in personal safety, liberty, and property.

4010 Internship. Three credits. Supervised work in a law office or agency as a paralegal assistant.

## Honors College

The department offers these courses in Honors:
Political Science 1010 (Fall)
Political Science 2010 (Spring)
Political Science 4230 (Fall)

## Graduate Study

A graduate minor is offered in Political Science. Requirements and a list of the courses offered for graduate credit are published in the Graduate Catalog.


# Department of Psychology 

## Dennis Papini, Chair Jones Hall 103

The Department of Psychology offers programs which lead to three graduate degrees: the Master of Arts with a major in Psychology and concentrations in Clinical, Experimental, Industrial/Organizational, Quantitative Psychology, and Pre-Specialist in Education: School Psychology; the Master of Education with a major in School Counseling, Pre K-12; and the Specialist in Education with a major in Curriculum and Instruction, concentration in School Psychology. The department also offers a minor at the graduate level.
Normally, a score of 900 combined verbal and quantitative sections of the Graduate Record Examination is recommended for admission to the Specialist in Education program or to the Master of Arts with concentrations in Clinical, Experimental, Quantitative Psychology, and Pre-Specialist in Education: School Psychology; a GRE quantitative of 450 is expected for the Industrial/ Organizational concentration. A score of 900 combined verbal and quantitative on the GRE is expected for admission to the M.Ed. program. Applicants for Clinical also must submit a GRE Psychology Subject Examination. An undergraduate GPA of 3.00 is normally required for unconditional admission.

## Requirements for the Master of Arts

The Master of Arts in Psychology has five different concentrations. Each concentration has its own admission standards and required courses. Listed below are the general admission and graduation standards for the M.A. programs. Following the shared standards is additional information, including required courses, for specific concentrations.

## Admissions Process

Admission to graduate study is not automatic for students meeting minimal admission requirements. Students are selected from a pool of qualified applicants. Each year the number of students admitted to the program depends on the availability of adequate faculty supervision. Applications for Summer/Fall admission must be complete by March 1 and applications for Spring admission must be complete by October 1; late applicants who meet the admission criteria may be considered on a case-by-case basis. (See admission standards under Admission to the College of Graduate Studies.) Applicants must have completed 18 hours in undergraduate psychology to be considered for admission to a concentration
area. Applicants to the Clinical program should contact the department for a special application and reference forms. Applicants to the School Counseling Program should contact the department for special reference forms. Applicants to Experimental and School Psychology must provide a letter of intent stating goals and objectives.

## Conditional Admission

Students who do not meet admission requirements may be admitted conditionally to a specific concentration. Students admitted conditionally must maintain a 3.25 GPA in their first 12 hours of required graduate courses in their concentration area.

Readmission: See each area coordinator and program handbook for readmission policy.

## Candidacy Form

Students must file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.

## Graduation Requirements

Candidate must

1. demonstrate knowledge of the core areas of psychology by completing the following courses at either the undergraduate or graduate level (relevant courses offered at MTSU are listed in parentheses):
a. group measurement/testing (PSY 4260/5260 or 6050);
b. abnormal psychology or personality (PSY 3230/5230, 3590, 6020 or 6030);
c. learning or cognition (PSY 4040, 4480/5480, 4800/5800, or 6190);
d. social or developmental (PSY 2210, 2300, 4190, 4210/5210, 4610/5610, 6120, 6130, 6410);
e. physiological, sensation and perception, or research methods (PSY 3070/5070, 4780/5780, 4240/5240, or 4030/5030);
2. complete a total of 45 semester hours ( 46 for Clinical), including at least 33 hours in psychology. For some concentrations, the remaining hours may include either a minor or two cognates in other academic areas as approved by the graduate advisor. Only 30 percent of the total number of hours may be dually listed (5000 level meeting in conjunction with 4000 or 3000 level) courses;
3. complete PSY 6280 (PSY 3020 or equivalent is a prerequisite for PSY 6280), 6290, and 6640 (3 hours);
4. successfully write and orally present a written thesis evaluated by a committee of psychology faculty in conjunction with PSY 6640;
5. pass a written comprehensive examination prepared by the faculty in the student's concentration (may be taken no more than twice).

## Performance Requirements

Students must be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may
reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements.

## Psychology Major <br> Concentration: Clinical

Prerequisites: Courses listed under 1. a, c, d, and e (above). Under 1. b., Abnormal Psychology is required. Graduate courses taken to satisfy these prerequisites do not count as part of the 46 graduate hours required for the M.A. degree. Students must be fully admitted prior to enrolling in required core courses. Non-degree-seeking students may not enroll in required clinical courses, except by special permission.

| Core Clinical Courses (Required of all clinical students) |  |  |
| :--- | :--- | :--- |
| PSY | 5470 | Theories of Counseling |
| PSY | 6020 | Theories of Personality |
| PSY | 6100 | Intellectual Assessment |
| PSY | 6101 | Laboratory in Intellectual Assessment |
| PSY | 6250 | Objective Personality Assessment |
| PSY | 6280 | Psychological Statistics: Regression |
| PSY | 6290 | Psychological Statistics: Anova |
| PSY | 6510 | Psychopathology |
| PSY | 6640 | Thesis Research |
| PSY | 6690 | Professional Issues and Roles |
| PSY | 6800 | Techniques of Psychotherapy |
| PSY | 6851 | Assessment Field Practicum (Clinical) |

## Admissions Criteria for M.A. Clinical Curriculum with Specializations

All potential students must apply to the clinical program and will be evaluated on the current criteria as delineated in the graduate catalog (i.e., GRE, GPA, transcript, three letters of reference, and the supplemental clinical application).

If a student already has an M.A. degree from either the Clinical or School Psychology programs at MTSU and wants to return to take specific courses to prepare for either the psychological assistant or the behavior analyst specialization, he/ she may be considered in the applicant pool. If admitted, however, no new degree would be obtained; the student would be a non-degree-seeking student, but would be admitted to take specific clinical courses.

If a student has a master's in or graduate coursework from other MTSU programs or from another university, they also may be considered in the applicant pool. If accepted, credit for previous coursework would be done on an individual basis and would be consistent with the following MTSU policies:

1. If no previous graduate degree was obtained, up to 12 graduate credit hours may be applied to the Clinical master's.
2. If a previous master's degree was obtained, no credit that applied to that master's can be applied to the Clinical master's at MTSU. Additional coursework would be necessary to meet the 46-hour program requirement.

Students should choose a specialization from within the major. Psychological Assistant
Courses are consistent with Tennessee law for CPA. This specialization consists of the core clinical courses plus a multicultural course and 9 hours of electives.
Group A: Cultural Issues and Individual Differences (3 hours)
PSY 5720 Multicultural Perspectives in Psychology and Education
PSY 7100 Multicultural and Social Bases for Assessment and Intervention Practices
Group B: Substantive Areas/Applied Areas of Formal Testing and Interventions (9 hours)
PSY 5460 Psychology of Happiness and Well Being
PSY 5610 Adult Psychology and Aging
PSY 5780 Human Neuropsychology
PSY 5820 Psychology of Language
PSY 6120 Developmental Psychology: Child
PSY 6130 Developmental Psychology: Adolescent
PSY 6190 Advanced Cognitive Psychology
PSY 6240 Projective Measurements
PSY 6340 Behavioral Medicine: Theory and Application
PSY 6400 Psychological Disorders of Children
PSY 6440 Advanced Applied Behavioral Analysis
PSY 6500 Behavioral Methodology
PSY 6520 Psychopharmacology
PSY 6530 Psychology of Reading and Reading Development
PSY 6580 Multivariate Data Analysis
PSY 6710 Community Psychology
PSY 6750 Psychology and Assessment of Learning Disabilities
PSY 6770 Assessment and Therapeutic Interventions for
Children's Emotional Problems
PSY 6780 Clinical Neuropsychology
PSY 6820 Family Therapy: Evaluation and Treatment Planning
PSY 6890 Consultation
PSY 7520 Assessment and Treatment of Addictions

## Behavior Analyst Option

Nine (9) hours from

| PSY | 5480 | Learning Theories OR |
| :--- | :---: | :--- |
|  | 5490 | Operant Conditioning |
| PSY | 6440 | Advanced Applied Behavioral Analysis |
| PSY | 6500 | Behavioral Methodology (and BA ethics) |
| Choose three | (3) hours from the following: |  |
| PSY | 6080 | Interventions with Children and Adolescents |
| PSY | 6400 | Psychological Disorders of Children |
| PSY | 6520 | Psychopharmacology |
| PSY | 6770 | Assessment and Therapeutic Interventions for |
|  |  | Children's Emotional Problems |
| PSY | 6340 | Behavioral Medicine: Theory and Application |
| PSY | 6350 | Laboratory in Behavioral Medicine |

## Electives

Students in the Clinical concentration must take 12 elective credits in addition to the required courses in the core area and the research area. No more than 6 of the 12 elective credits may be listed as 5000level courses. In order to meet requirements for state licensure, the electives must be in the specific areas listed below.

1. Students must choose at least 3 credits from the following list. (Up to 9 credits may be chosen from this list):
PSY 5780 Human Neuropsychology
PSY 6080 Interventions with Children and Adolescents
PSY 6170 Group Counseling and Psychotherapy
PSY 6340 Behavioral Medicine: Theory and Application
PSY 6400 Psychological Disorders of Children
PSY 6440 Advanced Applied Behavioral Analysis
PSY 6520 Psychopharmacology
PSY 6820 Family Therapy: Evaluation and Treatment Planning
PSY 6830 Techniques of Family Therapy
PSY 7520 Assessment and Treatment of Addictions

## No more than one of the following: <br> PSY 6710 Community Psychology <br> PSY 6890 Consultation <br> No more than two of the following: <br> PSY 6240 Projective Measurements <br> PSY 6750 Psychology and Assessment of Learning Disabilities <br> PSY 6770 Assessment and Therapeutic Interventions for Children's Emotional Problems <br> PSY 6780 Clinical Neuropsychology

2. If students choose only $\mathbf{3}$ credits from the above list, they must choose AT LEAST 3 credits from the following:
PSY 5460 Psychology of Happiness and Well-Being
PSY 6030 Current Topics in Personality
PSY 6580 Multivariate Data Analysis
PSY 7100 Multicultural and Social Bases for Assessment and Intervention Practices
No more than one of the following (must be in addition to the course which meets prerequisite):
PSY 5610 Adult Psychology and Aging
PSY 6120 Developmental Psychology: Child
PSY 6130 Developmental Psychology: Adolescent

## No more than one of the following:

PSY 6190 Advanced Cognitive Psychology
PSY 6530 Psychology of Reading and Reading Development
3. If students need an additional 3 elective credits, they may choose from the following:
PSY 6390 Independent Research in Psychology: Clinical (1-3 credits)
PSY 6630 Literature Review and Reading in Psychology: Clinical (1 credit)
PSY 6870 Field Practicum (Clinical)
Professional liability insurance (\$1,000,000 each incident/\$3,000,000 annual aggregate) must be maintained throughout enrollment in the program, with a current insurance binder filed with the department at all times.

## Psychology Major <br> Concentration: Experimental

The goal of the Experimental concentration in psychology is to prepare the student to be a research psychologist. The primary application of this degree is to prepare the student to enter a Ph.D. program in psychology. However, many industries and clinical settings are interested in students with the analytical and statistical skills of a research psychologist.

Experimental students need to have a strong background in the core areas of experimental psychology. This background can be met at the undergraduate level; however, these competencies may also be completed while enrolled in the program (see pre- and corequisites listed below). Beyond these competencies, students must take a small core of required courses and develop a specialization in one research area. Students may specialize in developmental, cognitive science, learning, or social/personality. Suggested courses for each specialization are listed below. Specific course requirements for each specialization must be submitted in a program of study and approved by three faculty members to include the student's graduate advisor and the experimental area coordinator. At least one committee member must have expertise in the chosen research specialization.

Prerequisites/Corequisites (may be met at the undergraduate level): Students must complete courses in the following areas: 1) behavioral neuroscience or sensation and perception, 2) child or lifespan development, 3) learning or cognitive, 4) research methods, 5) statistics, and 6) social/personality. Students who have not taken these courses at the undergraduate level may take a 5000-level equivalent while in the graduate program.

| Core Courses |  |  |
| :---: | :---: | :---: |
| PSY | 6600 | Independent Research in Psychology: |
|  |  | General/Experimental (9 hours total) |
| PSY | 6670 | Literature Review and Reading in Psychology: |
|  |  | Behavioral Neuroscience (at least 3 hours) |
| Completion of an approved program of study in a research emphas |  |  |
| Suggested Courses in the Experimental Specializations |  |  |
| Developmental |  |  |
| PSY | 5250 | Psychology of Exceptional Children |
| PSY | 5610 | Adult Psychology and Aging |
| PSY | 5620 | Psychology of Women |
| PSY | 5820 | Psychology of Language |
| PSY | 6120 | Developmental Psychology: Child |
| PSY | 6130 | Developmental Psychology: Adolescent |
| PSY | 6190 | Advanced Cognitive Psychology |
| PSY | 6400 | Psychological Disorders of Children |
| PSY | 6410 | Development Across the Lifespan |
| PSY | 6530 | Psychology of Reading and Reading Development |


| Cognitive Science |  |  |
| :--- | :--- | :--- |
| PSY | 5780 | Human Neuropsychology |
| PSY | 5800 | Cognition: Thinking and Reasoning |
| PSY | 5820 | Psychology of Language |
| PSY | 6190 | Advanced Cognitive Psychology |
| PY | 6530 | Psychology of Reading and Reading Development |
| PSY | 6560 | Computer-Based Statistical Packages |
| PSY | 6580 | Multivariate Data Analysis |

## Social/Personality

| PSY | 5380 | Group Dynamics |
| :--- | :--- | :--- |
| PSY | 5390 | Persuasion |
| PSY | 5420 | Experimental Social Psychology |
| PSY | 5440 | Social Psychology of Close Relationships |
| PSY | 5450 | Psychology of the Self |
| PSY | 6020 | Theories of Personality |
| PSY | 6030 | Current Topics in Personality |
| PSY | 6190 | Advanced Cognitive Psychology |
| PSY | 6380 | Work Group Effectiveness |
| PSY | 6560 | Computer-Based Statistical Packages |
| PSY | 6580 | Multivariate Data Analysis |

## Learning

PSY 5490 Operant Conditioning
PSY 5800 Cognition: Thinking and Reasoning
PSY 6190 Advanced Cognitive Psychology
PSY 6440 Advanced Applied Behavioral Analysis
PSY 6560 Computer-Based Statistical Packages
A 12-hour minor in biology or other related field

## Psychology Major <br> Concentration: Industrial/Organizational

## Prerequisite/Corequisite

Introductory course in I/O Psychology such as
PSY 3320 Introduction to Industrial and Organizational Psychology

[^5]| PSY | 6300 | Literature Review and Reading in Psychology: <br> Industrial/Organizational <br> Performance Appraisal and Job Analysis |
| :--- | :--- | :--- |
| PSY | 6320 | Professional Issues in Industrial/Organizational <br> PSY |
| 6330 | Psychology |  |
| PSY | 6420 | Advanced Personnel Selection and Placement <br> Advanced Organizational Psychology |
| PSY | 6450 | Advan <br> PSY 6570 |
|  | Psychological Research Methods in Human Resource <br> Management |  |

Two of the following four courses

| PSY | 5290 | Wage and Salary Administration |
| :--- | :--- | :--- |
| PSY | 5370 | Motivation and Work Attitudes |
| PSY | 6360 | Organizational Change and Development |
| PSY | 6380 | Work Group Effectiveness |

Electives (not an inclusive list; consult advisor)
PSY 5340 Human Factors Psychology
PSY 5350 Safety Psychology
PSY 6370 Organizational Skills

## Psychology Major <br> Concentration: Quantitative

Required

| PSY | 6050 | Psychological Testing |
| :--- | :--- | :--- |
| PSY | 6210 | Advanced Psychometrics |
| PSY | 6460 | Factor Analysis and Related Methods |
| PSY | 6490 | Practicum: Quantitative Psychology |
| PSY | 6560 | Computer-Based Statistical Packages |
| PSY | 6580 | Multivariate Data Analysis |

## Two of the following:

PSY 6470 Computer Simulation in the Behavioral Sciences
PSY 6480 Advanced Topics in Quantitative Psychology
PSY 6550 Structural Equation Modeling
PSY 6600 Independent Research in Psychology:
General/Experimental, 3 credits
STAT 5190 Mathematical Statistics II
STAT 5370 Nonparametric Statistics
Electives
Two six-hour cognates or a 12 -hour minor from any sub-area in psychology or related areas with the permission of the academic advisor.

## Psychology Major <br> Concentration: Pre-Specialist in Education: School Psychology

The School Psychology program includes two degrees. Program completion and endorsement for a State Department of Education license requires successful completion of both degrees. The M.A. portion of the program comes first. The Ed.S. is an advanced degree. It is only available to students who have master's degrees in school psychology. Respecializing students from other master's programs in psychology or counseling may apply, but they will be required to complete deficiencies. The school psychology program is field based. As such, a student is required to be continuously enrolled in at least one field-based course every semester from the completion of PSY 6140 until the completion of the program. PSY 6960, 6980, 7080, and 7810 are field-based courses. Tennessee teacher licensing in school psychology is obtained through MTSU's program. In addition to completing the M.A. and Ed.S. degrees, candidates must earn an acceptable score on the School Psychology PRAXIS test.

## Required

| PSY | 6060 | School Psychology |
| :--- | :--- | :--- |
| PSY | 6080 | Interventions with Children and Adolescents |
| PSY | 6100 | Intellectual Assessment |
| PSY | 6101 | Laboratory in Intellectual Assessment |
| PSY | 6140 | Practicum: School Psychology |
| PSY | 6750 | Psychology and Assessment of Learning Disabilities |
| PSY | 6760 | Educational Assessment |
| PSY | 6770 | Assessment and Therapeutic Interventions for |
|  |  | Children's Emotional Problems |
| PSY | 6890 | Consultation |
| PSY | 6950 | Literature Review and Reading in Psychology: School |

Professional liability insurance, coverage amount at the student's discretion, must be maintained throughout enrollment in the program, with a current insurance binder filed with the department at all times.

## Requirements for the Master of Education

## School Counseling Major

This M.Ed. is a 49-semester hour program designed to train counselors for work in the schools pre-K through 12. The concentration is developmental with a prevention/intervention focus. The curriculum covers the eight core areas required by the Council for Accreditation of Counseling and Related Education Programs (CACREP) as well as State Department of Education licensing standards. Students will be evaluated for readiness prior to placement in practicums and internship. One hundred hours of practicum, 600 total hours in two internships, plus an additional 60 hours school experience for persons not licensed to teach are required. Students seeking Tennessee School counseling licensure must request recommendation from a committee of faculty. Completion of the program is not a guarantee of the recommendation for licensure.

Candidate must

1. be evaluated by a committee composed of psychology faculty members and practicing school counselors for admission.
2. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
3. complete 49 semester hours with no more than 30 percent of the total degree hours dual-listed as undergraduate/graduate hours.
4. successfully complete a written comprehensive examination (may be taken no more than twice).

## Performance Requirements

Students must be able to meet the demands required for professional work in psychology. Therefore, students may be subject to dismissal from the Psychology Department if they (a) commit a serious breach of ethics or gross professional negligence, or (b) present evidence of impaired psychological functioning that would present a danger to themselves or others in a professional role. Students who are dismissed may reapply and will be considered for readmission on a competitive basis. Students who reapply may be asked to provide evidence of improved ability to meet performance requirements.

## Prerequisite/Corequisite:

PSY 3020 Basic Statistics for Behavioral Science

| Required |  |  |
| :--- | :--- | :--- |
| PSY | 5470 | Theories of Counseling |
| PSY | 5720 | Multicultural Perspectives in Psychology and Education |
| PSY | 6150 | Career Counseling |
| PSY | 6160 | Foundations of School Counseling |
| PSY | 6170 | Group Counseling and Psychotherapy |
|  |  | (with PSY 6180 Laboratory) |
| PSY | 6220 | Organization and Administration of School |
|  |  | Counseling Services |
| PSY | 6230 | Legal and Ethical Issues in School Counseling |
| PSY | 6260 | Pre-Practicum in Counseling |
| PSY | 6270 | Practicum in School Counseling |
| PSY | 6410 | Development Across the Lifespan |
| PSY | 6610 | Introduction to Educational and Psychological Research |
| PSY | 6920 | Internship: Secondary School Counseling |
| PSY | 6930 | Internship: Elementary School Counseling |
| PSY | 6890 | Consultation |

## One of the following:

PSY 5250 Psychology of Exceptional Children
PSY 6400 Psychological Disorders of Children or SPED 6800
One of the following:
PSY 5260 Introduction to Psychological Testing
PSY 6050 Psychological Testing
Professional liability insurance, coverage amount at the student's discretion, must be maintained throughout enrollment in the program, with a current insurance binder filed with the program coordinator at all times.

For Candidates Not Holding a Tennessee Teacher's License Candidates without a teacher license must meet these additional requirements if they intend to seek recommendation for licensing as a school counselor in Tennessee.

1. Have on the transcript a course in Survey of Exceptional Children.
2. Take and pass with at least a grade of B ELED 5201, Observation and Participation. This is a program prerequisite.
3. Take and pass (per SDE criteria) the Praxis II-Specialty Area Test.

## Requirements for the Specialist in Education

## Curriculum and Instruction Major Concentration: School Psychology

The School Psychology program is field-based. As such, a student is required to be continuously enrolled in at least one field-based course every semester from the completion of PSY 6140 until the completion of the program. PSY 6960, 6980, 7080, and 7810 are field-based courses. The policy excludes summer sessions.

Tennessee teacher licensing in School Psychology is obtained through MTSU's program. Licensing requires four things: (1) completion of the Ed.S. with a concentration in School Psychology, (2) 1,200 hours of internship in school psychology, (3) acceptable scores on the school psychology Praxis Test, and (4) verification of readiness for independent practice by an internship supervisor.

## Candidate must

1. hold a master's degree in psychology, educational psychology, or school counseling and normally should have completed all courses listed under the M.A. program for the Pre-Specialist in Education: School Psychology concentration.
2. complete a minimum of 30 semester hours.
3. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
4. satisfy a residency requirement consisting of (a) the completion of 18 semester hours of graduate study within a 12-month period, and (b) full-time enrollment (at least 9 semester hours) for at least one semester.
5. complete the following courses during graduate studies. These areas are required and are based on National Association of School Psychologists standards.

## a. Psychological Foundations

1. Biological Bases of Behavior (PSY 5240 or 6520 or 6780)
2. Cultural Diversity (PSY 7100)
3. Child/Adolescent Development (PSY 6120 or 6130)
4. Human Exceptionalities (Individual Differences) (PSY 5250 or 6400)
5. Human Learning (PSY 5480 or 6190)
6. Social Bases of Behavior (PSY 7100)
b. Educational Foundations
7. Instruction and Remedial Techniques (Instructional Design) (PSY 6530)
8. Organization and Operation of Schools (SPSE 7130 and FOED 7060)
c. Assessment (Diverse Models)
9. Learning Disabilities (PSY 6750 and 6760)
10. Intelligence (PSY 6100 and 6101)
11. Personality (PSY 6770)
d. Interventions (Direct and Indirect)
12. Consultation (Systems and Organizational Change) (PSY 6890)
13. Individual Counseling (PSY 6080 and 7080)
14. Group Counseling (PSY 6080 and 7080)
15. Behavior Management (PSY 6440)
e. Statistics/Research Methodologies
16. Statistics (PSY 6280)
17. Evaluation (PSY 6440 or FOED 7610)
18. Measurement (PSY 6290)
f. Professional School Psychology
19. History and Foundations (PSY 6060)
20. Legal and Ethical Issues (PSY 6060)
21. Professional Issues/Standards (PSY 6140)
22. Role and Function (PSY 6140)
23. Alternative Models (PSY 6140)
24. Emergent Technologies (PSY 6060);

Six-hour cognate (only for students who have completed a thesis)
6. receive preparation (at least a portion of a course) in each of the following 24 areas during graduate studies; these areas are based on National Association of School Psychologists standards
a. Psychological Foundations

1. Biological Bases of Behavior
2. Cultural Diversity
3. Child/Adolescent Development
4. Human Exceptionalities (Individual Differences)
5. Human Learning
6. Social Bases of Behavior
b. Educational Foundations
7. Instruction and Remedial Techniques (Instructional Design)
8. Organization and Operation of Schools
c. Assessment (Diverse Models)
9. Learning Disabilities
10. Intelligence
11. Personality
d. Interventions (Direct and Indirect)
12. Consultation (Systems and Organizational Change)
13. Individual Counseling
14. Group Counseling
15. Behavior Management
e. Statistics/Research Methodologies
16. Statistics
17. Evaluation
18. Measurement
f. Professional School Psychology
19. History and Foundations
20. Legal and Ethical Issues
21. Professional Issues/Standards
22. Role and Function
23. Alternative Models
24. Emergent Technologies;
25. complete 7810, an internship of 1200 hours after completion of the M.A. degree courses.
26. successfully complete a written comprehensive examination (may be taken no more than twice).

Professional liability insurance, coverage amount at the student's discretion, must be maintained throughout enrollment in the program, with a current insurance binder filed with the program coordinator at all times.


## Courses in Psychology [PSY]

5030 Psychology of Sensation and Perception. Three credits. Prerequisite: PSY 1410. Modern theories of perception as they relate to knowledge of the external world through perceptual acquaintance. Philosophy of perception, history of sensory psychology, physiological mechanisms of perception, and ecological determinants of perceptual capabilities.

5050 Applied Psychopharmacology. Three credits. Impact of drugs on behavior in today's society. The nature of drug use, abuse, psychological and physiological dependence examined.

5060 Sport Psychology. Three credits. Prerequisite: PSY 1410 or consent of instructor. (Same as ATHC 5060.) Application of psychological principles, motivational research, and social/psychological findings to the arena of sports. Theory and application of performance enhancement and teamwork in sports.

5070 Research Methods. Four credits. Prerequisite: PSY 3020. Analysis of methodological issues in psychological research. Offers skills in the formulation, execution, interpretation, and presentation of psychological investigations. Three hours lecture and one one-hour laboratory.

5120 Psychology of Criminal Behavior. Three credits. Survey of theory and research pertaining to criminal behavior, covering topics such as mental illness and crime, criminal homicide, assault, and sex offenses.

5130 Laboratory in Psychology of Sensation and Perception. One credit.

5150 Laboratory in Behavioral Neuroscience. One credit.
5160 Laboratory in Human Factors Psychology. One credit.
5170 Laboratory in Experimental Social Psychology. One credit.
5180 Laboratory in Learning Theories. One credit.
5210 Adolescent Psychology. Three credits. Physiological, emotional, mental, and social characteristics of adolescent development, including primary vectors of influence.

5220 Correctional Psychology. Three credits. Law enforcement, delinquency, and criminal psychology, including psychological evaluation, classification, therapy, and rehabilitation. Special classifications. Field problems. Preventive implications.

5230 Abnormal Psychology. Three credits. Patterns of maladaptive behavior, including anxiety, depression, schizophrenia, antisocial behavior, and mental retardation.

5240 Behavioral Neuroscience. Three credits. The role of the brain in those areas which are typically considered by psychology, such as sensory and motor functions, motivation, higher mental functions, and mental disorders.

5250 Psychology of Exceptional Children. Three credits. Identification and etiology of patterns of exceptionality, with consideration given to behavioral manifestations and preventive and correctional programs.

5260 Introduction to Psychological Testing. Three credits. Modern practices in test construction, selection, and application to classroom and guidance situations. (Student required to participate as principal and subject in administration, scoring, profiling, and in making predictions based on test results.)

5290 Wage and Salary Administration. Three credits. Analysis of theory and practice in administering compensation. Practices and issues related to job analysis, job evaluation, wage and salary administration, incentive plans, and legal considerations.

5320 Introduction to Industrial/Organizational Psychology. Three credits. Applications of psychology to business and industry: employee selection, performance appraisal, training, leadership, motivation, work environment, job design, safety, and work stress.

5340 Human Factors Psychology. Three credits. Prerequisite: PSY 3320/5320 or consent of instructor. The process of designing for human use. Considers individual differences, visual, auditory, and tactile displays, anthropometry, illumination, noise, humans in motion, and space and environmental studies.

5350 Safety Psychology. Three credits. Basic theories of accident causation, safety research literature, methods of accident prevention, and industrial hygiene.

5370 Motivation and Work Attitudes. Three credits. Understanding and application of motivation theories, particularly in the workplace. Emotions; work attitudes, such as job satisfaction; organizational commitment and organizational culture; effects on performance; measurement.

5380 Group Dynamics. Three credits. Functioning of groups. Includes development of group structure, group conflict, cohesion, social influence, leadership, group productivity, group decision making, and growth groups.

5390 Persuasion. Three credits. Survey and analysis of theory and research on interpersonal influence. Applications of findings to various areas of human experience.

5420 Experimental Social Psychology. Three credits. Prerequisite: PSY 2210. Survey of research rationales, strategies, procedures, and methodologies. Ethical concerns and special problems in human subject research.

5440 Social Psychology of Close Relationships. Three credits. Prerequisites: PSY 1410 and 2210. Theoretical and empirical issues in the scientific study of adult, close relationships from a social psychological perspective: initial attraction, relationship formation and maintenance, and dissolution. (Not a course in the broad area of marriage and the family; See CDFS 3320 Family Relationships and SOC 2500 Marriage and Family.)

5450 Psychology of the Self. Three credits. Historical and contemporary theory and research on the self and self-related topics. Definitional and measurement issues, the self as a structure and a process, self-development across the lifespan, and factors affecting self-perception and self-evaluation.

5460 Psychology of Happiness and Well-Being. Three credits. Prerequisite: PSY 1410. Recommended: PSY 2210 and PSY 3230. Survey of the theoretical and research literature in the areas of subjective well-being, happiness, life satisfaction, stress-resistant personality styles, and self-actualizations.

5470 Theories of Counseling. Three credits. Integration of the major theories of counseling and psychotherapy and their application.

5480 Learning Theories. Three credits. Research and experiments in learning and the related growth of the major theories of learning with emphasis on classical and instrumental conditioning and related topics.

5490 Operant Conditioning. Three credits. Prerequisite: PSY 1410. Philosophy of B.F. Skinner's behaviorism explored in his own writings and those of his followers and critics. Current applications of behaviorism in all areas of psychology (child, marriage and family, animal conditioning, mental health, addictions, etc.) also examined.

5600 Psychosexual Adjustment. Three credits. Psychological, cultural, and biological facets of the human sexual experience. Attitudes and behaviors, variances and dysfunctions, implications, and strategies for intervention.

5610 Adult Psychology and Aging. Three credits. A survey of the research on adult development with emphasis on old age. Examines the physical, intellectual, social, vocational, and personality changes during the adult years.

5620 Psychology of Women. Three credits. Psychological impact of the culture on women's attitudes, roles, aspirations, problems, and personality development.

5630 Death and Dying. Three credits. An experiential course covering the folklore of thanatology, the funeral industry, handling grief, counseling the bereaved, the hospice concept. Objectives include an attempt to view death with equanimity and personal growth through confronting death.

5650 Health Psychology. Three credits. Prerequisite: PSY 1410 or consent of instructor. Psychological factors and principles involved in the study of correlates of health and illness, disease prevention, therapeutic interventions, and rehabilitative strategies.

5655 Foundations of Mental Health Counseling. Three credits. Prerequisites: PSY 1410 and 3230 or equivalent. History, roles, and duties of the professional mental health counselor. Managed care and third party reimbursement issues, administration and supervision of mental health services, and other salient issues relating to the role of the professional mental health counselor. Preparation for graduate-level training in mental health counseling.

5660- Psychology Seminar. One credit each. Representative and inte-
5680 grative study of scientific journals of the field. May be taken for total of three credits.
5660 Industrial-Social
5670 Clinical-Personality
5680 General-Experimental
5700 History and Systems of Psychology. Three credits. A survey of the history and intensive coverage of current systems of psychology.

5720 Multicultural Perspectives in Psychology and Education. Three credits. Theories and research relative to the education of multiethnic/racial minorities. Relation of culture and socialization to learning styles, assessment practices, and counseling considerations.

5740- Apprenticeship. One to three credits each. Supervised practi-
5770 cal experience utilizing psychological principles and tools in an established organization.
5740 Child
5750 Pre-Clinical
5760 Adolescent
5770 Gerontology

5780 Human Neuropsychology. Three credits. Prerequisite: PSY 5240 or consent of instructor. Organization and function of specific brain areas and the behavioral deficits and changes resulting from focal and diffuse brain damage.

5800 Cognition: Thinking and Reasoning. Three credits. Research and theory on thinking and reasoning and their roles in complex cognitive processes such as comprehension and higher learning, memory encoding and retrieval, mental model construction, hypothesis testing, goal setting and planning, problem solving, judgment and decision making, intelligence, and creativity.

5820 Psychology of Language. Three credits. Prerequisite: PSY 1410. A cognitive approach to how people learn and use language to communicate. Covers basic psycholinguistics (production, perception, comprehension, and mental representation), language acquisition, and applied psycholinguistics (bilingualism, language disorders, and machine language).

6000 Orientation to School Psychology. One credit. Introduction to a career as a school psychologist. Uses appropriate materials from the National Association of School Psychologists as well as relevant court decisions and legislative acts to orient students to school psychology.

6010 Clinical Interventions. Three credits. Prerequisites: Admission to the clinical program or permission of instructor; PSY 6510, 6800, and 6840. A supervised experience in which the student learns how to apply techniques of clinical interviewing for the purpose of developing, implementing, and evaluating treatment plans for clients. Liability insurance required prior to enrollment.

6020 Theories of Personality. Three credits. Examines traditional schools of personality theory and current developments within each.

6030 Current Topics in Personality. Three credits. Examines current research findings on personality traits and personality-related processes.

6040 Topics in Industrial/Organizational Psychology. Three credits. Focus on practical aspects of functioning as a professional in the field. Current issues, recent developments, and less-traditional relevant areas.

6050 Psychological Testing. Three credits. Prerequisite: PSY 3020 or equivalent. Modern practices in test construction, selection, and application; legal guidelines, reliability, and validity. Intelligence, abilities, interests, attitudes, values, and personality testing. Students required to participate as examiners and subjects in administering, scoring, profiling, and in making predictions based on test results.

6060 School Psychology. Three credits. An introduction with particular emphasis on the psychosocial perspective. Adaptive instruction of behavior measures included, as are observations of classrooms and teacher interviews.

6070 Advanced Industrial Organizational Training and Development. Three credits. Prerequisite: PSY 3020 or equivalent. Theory and methodology used in the training and development of human resources in organizations: needs assessment, program development, program evaluation, and legal and special issues in training and development.

6080 Interventions with Children and Adolescents. Three credits. Prerequisite: PSY 5250 or 6400 or permission of instructor. Theoretical and practical issues related to interventions with children and adolescents exhibiting behavioral and emotional problems. Intervention strategies for specific problems. Experience designing and evaluating intervention plans. Legal, ethical, and practical issues.

6090 Practicum: Industrial/Organizational Psychology. Three credits. Prerequisite: Consent of instructor. Supervised experience in industry, business, or government using psychological principles at a professional, applied level.

6100 Intellectual Assessment. Three credits. Prerequisite: PSY 4260/ 5260 or 6050 . Practical didactic instruction in theory and practice of intelligence testing. Practical supervised experience in rapport, administration, scoring, and interpretation of individual intelligence tests for all age levels. Liability insurance is required.

6101 Laboratory in Intellectual Assessment. One credit. Skill development in completing intellectual assessments, calculating scores, and conducting parent conferences in a laboratory setting.

6110 Advanced Educational Psychology. Three credits. Applies and integrates psychological facts, principles, and techniques to the learning situation, including aspects of human development, learning, counseling, measurement, and evaluation.

6120 Developmental Psychology: Child. Three credits. Survey of research including prenatal, neonatal, and general physical development, emotional development, cognitive development, and social and personality development. Observations.

6130 Developmental Psychology: Adolescent. Three credits. Survey of research on adolescence from a biopsychosocial perspective. Student observation and study of developing adolescents from cognitive, biological, social, and psychological frameworks.

6140 Practicum: School Psychology. Three credits. Prerequisite: 15 semester hours of related graduate credits, including 6060, 6100, 6750, and 6770. Supervised assessment of low incidence learning and adjustment problems with follow-up parent, teacher, and administrator conferences. Practicum experience includes 90 hours of supervised work with a practicing, certified, fulltime psychologist. At least 50 percent of the practicum placement shall be in a school setting. Liability insurance required prior to enrollment.

6150 Career Counseling. Three credits. Prerequisites: PSY 5260 (or 6050) and 6260 or permission of department. History, theory, and issues related to career development, career choice, and career education in grades K-12. Demonstration of the ability to teach career information seeking behavior and decision-making skills.

6160 Foundations of School Counseling. Three credits. History, foundations, philosophy, and principles of developmental school counseling; roles and functions of school counselors, including professional and personal requirements.

6170 Group Counseling and Psychotherapy. Three credits. Prerequisites: PSY 5470 or 6020 ; PSY 6260 or 6010 ; permission of instructor. Corequisite: PSY 6180. Group process, ethics, and techniques. Application of counseling theory, group procedures, sociometrics, and group dynamics to interpersonal relations, mental health, school, and industrial settings. Supervised experience. Liability insurance required prior to enrollment.

6180 Laboratory in Group Counseling and Psychotherapy. One credit.

6190 Advanced Cognitive Psychology. Three credits. Topic-oriented overview of cognitive psychology. Models of attention, perception, memory, language, reasoning, problem solving, and decision making. Issues in cognitive development and cognitive neuropsychology.

6200 Laboratory in Advanced Cognitive Psychology. One credit.
6210 Advanced Psychometrics. Three credits. Prerequisites: PSY 6050 and 6280 or equivalents. Classical test theory and item response theory. Model, assumptions, and problems of classical test theory. Mathematical model, parameter estimation, and adaptive testing procedures using item response theory. Both theories will be utilized for test construction.

6220 Organization and Administration of School Counseling Services. Three credits. Prerequisite: PSY 6160. Organizing, administering, and managing the various components of a developmental school guidance and counseling program.

6230 Legal and Ethical Issues in School Counseling. Three credits. Issues affecting the practice of school counseling, including legal/law, ethics, and credentialing.

6240 Projective Measurements. Three credits. Prerequisite: PSY 6100, 4260/5260, or 6050. Rationale and systematic supervised training in use and scoring of Rorschach (half semester) and other projective devices (half semester). Liability insurance required prior to enrollment.

6250 Objective Personality Assessment. Three credits. Prerequisites: PSY 4260/5260 or 6050; PSY 6100. Practical supervised experience in objective measurement, analysis, and pattern confirmations of key variables of personality, both for normative and specific divergent groups. Emphasis on MMPI. Liability insurance required prior to enrollment.

6260 Pre-Practicum in Counseling. Three credits. Prerequisite: PSY 5470 or permission of instructor. Introduces basic communication skills, techniques, and process involved in working with clients in a counseling relationship; extensive role-play practice with peer and faculty feedback. Liability insurance required prior to enrollment.

6270 Practicum in School Counseling. Three credits. Prerequisites: PSY 6230; 6260 or $6080 ; 5470$ or 6020 ; and 6170 and 6180 or permission of instructor. Practical supervised experience in individual and group counseling in a school setting; audio and/or video taping of sessions for peer and faculty feedback. Liability insurance required prior to enrollment.

6280 Psychological Statistics: Regression. Three credits. Prerequisite: PSY 3020 or equivalent and satisfactory score on screening examination. Review of basic statistics; various correlation coefficients; multiple and partial correlation; simple and multiple regression. Laboratory included.

6290 Psychological Statistics: Anova. Three credits. Prerequisite: PSY 3020 or equivalent. Review of basic statistics. Scientific quantification, research design, and statistical analysis from the perspective of analysis of variance: one-way, factorial, repeated measures, and mixed designs. Laboratory included.

6320 Performance Appraisal and Job Analysis. Three credits. Prerequisites: PSY 6280 or permission of instructor. Analysis of theory and practice in job analysis and performance appraisal, including legal aspects, a survey of techniques available, current research, cognitive aspects, and reliability and validity issues.

6330 Professional Issues in Industrial/Organizational Psychology. One credit. Survey of issues related to professional ethics, relevant legislation, professional affiliations, professional identity, and professional responsibilities.

6340 Behavioral Medicine: Theory and Application. Three credits. Prerequisite: Consent of instructor. Review theory, methodology, and application of behavioral medicine. Includes behavioral science issues in health and applications of this information to diagnosis, prevention, treatment, and rehabilitation of health problems for which "life-stress" factors predominate. See PSY 6350.

6350 Laboratory in Behavioral Medicine. One credit. Prerequisite: Consent of instructor.

6360 Organizational Change and Development. Three credits. Prerequisite: PSY 6450 or permission of instructor. Analysis of theory and practice of organizational change and development, process of change, organizational development (OD) interventions, and evaluation and research of OD effectiveness.

6370 Organizational Skills. Three credits. Prerequisite: PSY 6450 or permission of instructor. Analysis of a variety of interpersonal situations which impact organizational effectiveness and climate. Development of skills: conflict resolution, interviewing, performance feedback, effective meetings, giving recognition, discipline.

6380 Work Group Effectiveness. Three credits. Prerequisite: PSY 5380, 6450, or permission of instructor. Analysis of factors leading to effective work groups. Topics covered include task effects on performance, group composition, leadership, group processes, and team building.

6400 Psychological Disorders of Children. Three credits. Current research and theory of behavioral, cognitive, and emotional disorders in childhood and adolescence.

6410 Development Across the Lifespan. Three credits. Theories and characteristics of human development covering the lifespan.

6420 Advanced Personnel Selection and Placement. Three credits, Prerequisites: PSY 5260 or 6050 and preferably PSY 6280. Legal and research aspects of personnel selection. Methods used for selection, including assessment centers, work samples, and psychological testing.

6430 Internship: Behavior Modification. Two to ten credits; may be repeated; enrollment must be continuous. Prerequisites: 30 semester hours of psychology including 4400, 5480, or 6020 . Minimum of 128 hours of supervised internship in an institutional setting. Liability insurance required prior to enrollment.

6440 Advanced Applied Behavioral Analysis. Three credits. Prerequisite: PSY 4400 or permission of instructor. Intensive presentation of methods used in behavioral assessment and therapy. Application of various behavioral and cognitive-behavioral procedures.

6450 Advanced Organizational Psychology. Three credits. Review of theory and empirical research in organizational psychology. Students will apply theory and research findings to understand
and explain work behavior at the individual, group, and organizational levels and will use this knowledge to solve organizational problems.

6460 Factor Analysis and Related Methods. Three credits. Prerequisites: PSY 6280 and 6290 or equivalents. Surveys each of the major factor analysis techniques and related latent trait theory with main focus on application. Nature, power, procedure, computer programming, interpretation, and limitations of each technique.

6470 Computer Simulation in the Behavioral Sciences. Three credits. Prerequisites: PSY 6280, 6290, and 6560 or equivalent. Basic issues in computer simulation and the monte carlo method. Emphasis on the application of simulation and Monte Carlo techniques to current topics in quantitative psychology. Students required to program selected computer-intensive statistical procedures and to perform Monte Carlo simulations using SAS.

6480 Advanced Topics in Quantitative Psychology. Three credits. (May be repeated for a total of six credits.) Prerequisites: PSY 6280 or equivalent. Advanced topics in quantitative psychology. Focus on current topics, recent issues, and less traditional areas of quantitative psychology. Relevant computer programs.

6490 Practicum: Quantitative Psychology. Three credits. Prerequisites: 30 credit hours of psychology including 6050, 6210, 6280, $6290,6460,6560,6580$, or consent of the instructor. Supervised experience in statistical consultation for social and behavioral sciences. 300 clock hours.

6500 Behavioral Methodology. Three credits. Techniques for design and evaluation of clinical treatment and research. Includes single subject and group designs. Emphasis on direct observation and data collection procedures, reliability, social validity, and generalization.

6510 Psychopathology. Three credits. Prerequisite: PSY 3230/5230. Extensive examination of the disorders included in the current diagnostic manual. Emphasis on adult disorders. Objectives are to enhance understanding of psychopathology and to develop minimal competence in diagnosis.

6520 Psychopharmacology. Three credits. Biochemical, neurophysiological, and neuroanatomical basis; emphasis on drugs used in investigating and treating psychological disorders.

6530 Psychology of Reading and Reading Development. Three credits. Overview of the cognitive processes involved in reading. The structure of both oral and written language; cognitive mechanisms in reading; language development and the acquisition of reading skills; developmental and acquired disorders of language and reading.

6540 Internship: Counseling and Clinical Psychology. Two to ten credits; may be repeated. Prerequisites: Permission of program coordinator in Clinical Psychology or School Counseling. Minimum of 128 supervised internship hours in a counseling or clinical institution. Liability insurance required prior to enrollment.

6550 Structural Equation Modeling. Three credits. Prerequisites: PSY 6280 and 6290 or equivalent. Structural equation modeling. Review of correlation, multiple regression and path analysis. Conceptual review of measurement models. Model specification, estimation, goodness of fit, and power of structural equation models. Relevant computer programs.

6560 Computer-Based Statistical Packages. Three credits. Prerequisite: PSY 3020 or equivalent. History, principles, and skills of
data analysis, using major statistical packages. Commands in both DATA and PROC steps. Other features including various functions, graphics, full screen process (FSP), and interactive matrix language (IML).

6570 Psychological Research Methods in Human Resource Management. Three credits. Prerequisite: PSY 6280 or permission of instructor. Theory and appropriate methodology for conducting research relevant to human resource practices in organizations. Applied psychometric theory and quasi-experimental design.

6580 Multivariate Data Analysis. Three credits. Prerequisites: PSY 6280 and 6290 or equivalent. Surveys each of the major multivariate data analysis techniques, with main focus on their application. Nature, power, procedure, computer programming, interpretation, and limitations of each.

6610 Introduction to Educational and Psychological Research. Three credits. Prerequisites: PSY 3020 and 4260/5260 or 6050. Research in education and psychology, research strategies, research ethics, research writing and reporting. Planning, implementing, and writing an approved scholarly research proposal.

6615 Basic and Applied Research Methods in Psychology. Three credits. Prerequisite: A grade of C or higher in PSY 3020 and 3070 or equivalent training (permission of department). Survey of experimental and quasi-experimental research designs employed in mental health fields. Theoretical and practical knowledge of various research designs and data analysis procedures explored through class lectures and lab assignments. Offers preparation for those training to become mental health practitioners to understand and critically evaluate psychological research.

6620 Independent Study: Industrial/Organizational Psychology. One to three credits. Prerequisite: Permission of instructor. Individualized library or empirical research project approved by instructor. A maximum of three credits will apply to a masters degree.

6640 Thesis Research. One to six credits. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. S/U grading.

6690 Professional Issues and Roles. Three credits. Systematic survey of ethical practice requirements, certification, and licensure for psychological practice. Examination of critical issues facing psychology and roles of psychologists.

6710 Community Psychology. Three credits. Prerequisite: PSY 6890. Ecological and environmental influences on behavior. Action research, program evaluation, prevention, and health promotion/ competence as community interventions examined, and beginning competencies developed. Field experiences included.

6750 Psychology and Assessment of Learning Disabilities. Three credits. Prerequisites: PSY 5260 or 6050 and 6100; prerequisite/corequisite: PSY 6760. Biological bases. Levels and skills of intervention and consultation for learning-disabled children, including reference to family, school, and community as sources of understanding and treatment. The disabilities, assessment, tools, results, and interventions. Liability insurance required prior to enrollment.

6760 Educational Assessment. One credit. Prerequisite: PSY 6100. Skills in conducting educational assessment for completing evaluations of children suspected of having learning disabilities.

6765 Diagnosis and Treatment Planning in Counseling. Three credits. Prerequisites: PSY 3230/5230 and 6270 or equivalent; PSY 6410 recommended. Development of skills in the diagnosis and treatment of select mental disorders across the life span. Treatment planning strategies using empirically based treatment interventions. Examines effect of mental disorders on normal development.

6770 Assessment and Therapeutic Interventions for Children's Emotional Problems. Three credits. Prerequisites: PSY 6100 and either 5250 or 6400 . Personality and behavioral assessment with children. Linking assessment and diagnosis to therapeutic intervention. Developing therapeutic relationships with children.

6780 Clinical Neuropsychology. Three credits. Prerequisites: PSY 5780, 6100, and 6250 or consent of instructor. Review of human neuroanatomy and neurophysiology. Administration of representative neuropsychological test batteries, especially the Halstead-Reitan Neuropsychological Test Battery. Applied experience with clinical population. Liability insurance required prior to enrollment.

6800 Techniques of Psychotherapy. Three credits. Psychotherapeutic techniques common to most, if not all, theoretical orientations: rapport building, goal setting, management of dangerous clients, etc.

6820 Family Therapy: Evaluation and Treatment Planning. Three credits. Examination of evaluation and intervention procedures of major models of family therapy. Emphasis on ethical issues for practitioners of family therapy.

6830 Techniques of Family Therapy. Three credits. Techniques common to most models of family therapy. Application of techniques to specific types of family problems. Liability insurance required prior to enrollment.

6840 Individual Psychotherapy. Three credits. Prerequisite: PSY 6800. Intensive presentation of theory and methods used in psychotherapy.

6850 Field Practicum (Clinical). Three credits. Prerequisites: Admission to the clinical program or permission of the instructor; 24 hours including PSY 6010, 6100, 6101, 6250, 6510, 6690, 6800, and 6840. Supervised clinical training in a community mental health agency. Supervision by a licensed psychologist at the agency. 300 clock hours for 3 credit hours. Liability insurance required prior to enrollment.

6851 Assessment Field Practicum (Clinical). Three credits. Prerequisites: Admission to the clinical master's program (or permission of instructor) and successful completion of clinical master's program core coursework. Supervised clinical training in psychological assessment and diagnostics in a community mental health or related agency. Supervision by a licensed psychologist at the agency required and provided. Liability insurance required prior to enrollment.

6860 Field Practicum (Clinical). Three credits. Prerequisite: PSY 6850. Must be taken in semester immediately following 6850. Continuation of supervised clinical training in a community mental health agency. Supervision by a licensed psychologist at the agency. 300 clock hours for 3 credit hours. Liability insurance required prior to enrollment.

6870 Field Practicum (Clinical). Three credits each. Prerequisites: Admission to the clinical program or permission of the instructor; 24 hours including PSY 6510, 6100, 6250, 6010, 6800, 6840, and 6690. Supervised clinical training in a community mental health agency. Supervision by a licensed psychologist at the agency. 300 clock hours for 3 credit hours. Liability insurance required prior to enrollment.

6885 Play Therapy: Therapy and Practice. Three credits. Prerequisites: Permission of instructor and one of the following: PSY 6010, 6080 , or 6270 or equivalent. Covers various theories and techniques of play therapy useful to both the school counselor and school psychologist and to the practitioner in community practice. Includes a practicum experience using play therapy with young children in play therapy lab. Liability insurance required prior to enrollment.

6890 Consultation. Three credits. Prerequisite: PSY 6270 or 6010 or 6080 or permission of instructor. Course must be taken prior to or concurrent with the first internship (6920 or 6930). Theory and practice of consultation as a useful technique in the helping professions. Applied experiences in schools and other settings. Liability insurance required prior to enrollment.

6900 Assessment of School Counseling Area Licensing Competencies. One to two credits. For the advanced student who by exceptional prior training or experience believes coursework for competence mastery is unnecessary in one or more of the licensing areas. All credit earned may be applied to a Master of Education degree in Psychology. May be repeated ten times.

6920 Internship: Secondary School Counseling. One to six credits. Prerequisite: PSY 6270. Actual experience in the counseling, consulting, coordinating services to adolescents, teachers, and parents. Requires 300 hours in the schools, with at least 40 percent in direct service. Liability insurance required prior to enrollment.

6930 Internship: Elementary School Counseling. One to six credits. Prerequisite: PSY 6270. Actual experience in the school (grades K-8) providing counseling, consulting, coordinating services to children, teachers, and parents. Requires 300 hours in the schools, with at least 40 percent in direct service. Liability insurance required prior to enrollment.

6960 Internship: School Psychology. Two to ten credits; may be repeated. Prerequisites: 30 semester hours of psychology including 6060, 6100, 6140, and 6770; approved thesis proposal. Minimum of 720 hours supervised internship, at least half in a school system. Not acceptable as Ed.S. internship. Liability insurance required prior to enrollment.

6970- Independent Study in School Psychology. One credit each.
6990 Competencies-oriented individualized study.
6970 Learning
6980 Fieldwork. Competencies-oriented field experience. Forty-five hours of work as a school psychologist in training. Course may be repeated up to three times for credit.
6990 Assessment and Consultation
Independent Research in Psychology. One to three credits per semester; may be taken more than once. Prerequisite: Permission of instructor. Individualized empirical research and library research approved by the instructor.
6310 Industrial/Organizational (1-3 credits applicable to degree)
6390 Clinical (1-3 credits applicable to degree)
6600 General/Experimental (1-9 credits applicable to degree)

6910 Counseling (1-3 credits applicable to degree)
6940 School (1-3 credits applicable to degree)
Literature Review and Reading in Psychology. One to three credits. Supervised literature review and/or readings on a topic of current importance in psychology. Topics and requirements obtained from individual faculty members. Specific courses may be repeated to a total of 6 credits.
6300 Industrial/Organizational
6590 General/Experimental
6630 Clinical
6660 Quantitative
6670 Behavioral Neuroscience
6680 Cognitive
6700 Developmental
6720 Learning
6730 Personality
6740 Reading
6790 Sensation and Perception
6810 Social
6950 School
6999/ 7999 Comprehensive Examination and Preparation. One credit. Open only to students who are not enrolled in any other graduate course and who will take the master's comprehensive examination during the term. The student must contact the graduate advisor during the first two weeks of the term for specifics regarding the details of this comprehensive examination preparatory course. Credit may not be applied to degree requirements.

7010 General Psychology Seminar: Physiological. One credit. A review of the structure, function, and influence on behavior of the basic physiological systems of the human.

7080 Practicum: Advanced Interventions with Children. Three credits. Prerequisite: PSY 6080. Theoretical and practical issues related to school interventions with children exhibiting psychological and behavior problems. Advanced skills development in consultation with parents and teachers, psychotherapy with children, and brief, short-term family therapy.

7100 Multicultural and Social Bases for Assessment and Intervention Practices. Three credits. Prerequisite: PSY 6140 or PSY 6270. Theoretical and practical issues related to appropriate practices in assessment, diagnosis, and therapeutic interventions for youth of diverse ethnic and cultural groups.

7350 Advanced Social Psychology. Three credits. Advanced content including cognizance of current journals and readings.

7520 Assessment and Treatment of Addictions. Three credits. Systematic analysis of the addictional phenomena with particular emphasis on dynamics and behavioral manifestations. Alcohol, street and prescription drugs, gambling, TV, religion, politics, and sex as aberrational forms of altering consciousness explored. Causation, clinical diagnostics, and treatment procedures as well as prevention are addressed in detail.

7810 Advanced Internship: School Psychology. Three to six credits (may be repeated; enrollment must be continuous). Prerequisites: 60 semester hours of psychology and M.A. degree; PSY 6060, 6100, 6140, and 6770. Minimum of 1200 hours supervised internship, at least half in a public school system. Liability insurance required prior to enrollment.

# Robert W. McLean School of Music 

George T. Riordan, Director<br>Wright Music Building 150

The McLean School of Music offers a Master of Arts degree in Music with specializations in collaborative piano (instrumental emphasis), collaborative piano (vocal emphasis), conducting, jazz studies, music composition, music composition for contemporary media, music education, musicology, and performance. A minor in Music is offered at the graduate level.
Applicants seeking admission to the Master of Arts degree must have completed an undergraduate degree in music with a GPA of at least 3.00 . They must also submit scores from the general Graduate Record Examination (GRE) and three letters of recommendation.
Applicants intending to specialize in collaborative piano, conducting, jazz studies, or performance must audition. Applicants who do not pass the audition may be allowed, at the discretion of the faculty, to be admitted with probationary status for one semester and must register for MUAP 5020, Private Instruction. They must reaudition at the end of their first semester of study. Students who do not pass the audition on their second attempt will be excused from the program.
Applicants intending to specialize in music composition or music composition for contemporary media must submit recordings and scores of their compositions. Those intending to specialize in music education must submit a 30 -minute video recording of themselves teaching. Applicants intending to specialize in musicology must submit two research papers of at least five pages in length, one of which is on a music topic.

## Requirements for the Master of Arts in Music

1. Before graduation, students must establish proficiencies in the areas required for the relevant specialization. (See curricula below for details.) Diagnostic examinations in music theory, music history, and diction will be scheduled during the first week of the first semester of study. Students who do not pass the diagnostic examinations should consult with the graduate coordinator to plan how to meet the requirements. Courses taken to meet proficiency requirements do not count toward the degree.
2. Seventy percent of the total degree hours must be at the 6000 level.
3. Prior to the completion of 24 semester hours, an Advancement to Candidacy Form must be filed with the Office of Graduate Studies.
4. No earlier than the student's last semester of study, the student must pass both written and oral comprehensive examinations. Comprehensive examinations may be repeated once.

## Areas of Specialization

## Specialization 1: Collaborative Piano with an Instrumental Emphasis (32 hours) <br> I. Proficiencies Required

a. Music History
b. Music Theory
c. Foreign Language (French or German)
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (20 hours)
a. MUAP 6682 Private Instruction (Collaborative Piano)
b. Three semesters of MUAP 6670 Graduate Recital One recital with voice, two with instruments
c. MUHL 5710 Vocal Literature
d. MUHL 5780 Chamber Music for Keyboard
e. One of the following instrumental literature courses

1. MUHL 5730 Brass Literature
2. MUHL 5750 String Literature
3. MUHL 5760 Woodwind Literature
IV. Group C (3 hours)

Free electives

## Specialization 2: Collaborative Piano with a Vocal Emphasis (32 hours)

I. Proficiencies Required
a. Music History
b. Music Theory
c. Foreign Language: French, Italian, and German
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (20 hours)
a. MUAP 6682 Private Instruction (Collaborative Piano)
b. Three semesters of MUAP 6670 Graduate Recital One recital with instruments, two with voice
c. MUHL 5710 Vocal Literature
d. MUHL 5770 Opera Literature
e. MUPD 5340 Techniques of Vocal Coaching
IV. Group C - Elective Courses (3 hours)

## Specialization 3: Conducting (30 hours)

I. Proficiencies Required
a. Music History
b. Music Theory
c. Keyboard
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (18 hours)
a. MUS 6030 Conducting Problems and Score Interpretation
b. MUS 6060 Advanced Conducting
c. MUAP 6709 Private Instruction - Conducting
d. Two ensembles
e. MUAP 6670 Graduate Recital

For Instrumental Conductors
f. MUHL 5790 Orchestral and Wind Ensemble Literature
g. MUED 5240 Instrumental Rehearsal Problems

For Choral Conductors
f. MUHL 5680 Choral Literature
g. MUTH 5270 Choral Arranging
IV. Group C - Elective Courses (3 hours)

## Specialization 4: Jazz Studies (32 hours)

I. Proficiencies Required
a. Music History
b. Music Theory
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (14 hours)
a. MUAP 668_Private Instruction
b. MUAP 669_Private Instruction
c. MUAP 670_Private Instruction
d. MUAP $667{ }^{-}$Graduate Recital
e. Two ensembles (Jazz Ensemble or Jazz Combo)
IV. Group C - Guided Elective Courses (9 hours)

Three courses to be selected from the following:
a. MUHL 5530 History of Jazz
b. MUPD 6330 Jazz Pedagogy and Program Administration
c. MUTH 5280 Advanced Jazz Arranging
d. MUTH 6060 Advanced Jazz Improvisation

## Specialization 5: Music Composition (33 hours)

I. Proficiencies Required
a. Performance skill on an applied instrument or voice
b. Keyboard (may also fulfill performance-skill requirement)
c. Music History
d. Music Theory
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (18 hours)
a. MUAP 6140 Composition
b. MUAP 6150 Composition
c. MUAP 6160 Composition
d. MUAP 6670 Graduate Recital
e. MUHL 6040 Twentieth-Century Music
f. MUTH 5190 Principles and Practices of Electronic Music
IV. Group C - Elective Courses ( 6 hours)
a. Guided elective to be chosen from fields of philosophy, art history, anthropology, or literature with consent of advisor (3 hours)
b. Free elective (3 hours)

## Specialization 6: Music Composition for Contemporary Media (36 hours)

I. Proficiencies Required
a. Performance skill on an applied instrument or voice
b. Keyboard (may also fulfill performance-skill requirement)
c. Music History
d. Music Theory
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (24 hours)
a. MUAP 6140 Composition
b. MUAP 6150 Composition
c. MUAP 6160 Composition
d. MUAP 6670 Graduate Recital
e. MUHL 6040 Twentieth-Century Music
f. MUTH 5190 Principles and Practices of Electronic Music
g. MUTH 5290 Electronic Music II
h. MUTH 5590 MIDI Studio Techniques
IV. Group C - Elective Courses (3 hours)

## Specialization 7: Music Education (32 hours)

I. Proficiencies Required
a. Music History
b. Music Theory
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (20 hours)
a. MUED 6010 Principles and Foundations of Music Education
b. MUED 6632 Contemporary Issues and Research in Music Education
c. MUS 6060 Advanced Conducting
d. MUED 6621 Music Education Research Project
e. Two ensembles
f. Six (6) hours to be selected from the following:

MUED 5210 General Music Program K-6
MUED 5670 Music for the Young Child
MUED 5220 Choral Music in the Middle and Senior High School
MUED 5190 General Music in the Middle and Senior High School
MUED 5240 Instrumental Rehearsal Problems
MUED 5250 Advanced Marching Techniques
MUED 5260 The Application of Technology to Music Teaching
IV. Group C - Elective Courses (3 hours)

## Specialization 8: Musicology (30 hours)

I. Proficiencies Required
a. Music History
b. Music Theory
c. Foreign Language
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (12 hours)
a. Two semesters of MUS 6630 Music Seminar
b. Course at the 6000 level in a related field (must be approved by the graduate coordinator)
c. MUS 6640 Thesis Research
IV. Group C - Elective Courses (9 hours)

## Specialization 9: Performance (32 hours)

I. Proficiencies Required
a. Music History
b. Music Theory

Vocalists must also establish proficiency in diction and in two
languages from among French, German, and Italian
II. Group A - Core Courses (9 hours)
a. MUS 6620 Bibliography and Research
b. MUTH 6050 Analytical Techniques
c. MUS 6630 Music Seminar
III. Group B - Courses in Specialization (20 hours)
a. MUAP 668_Private Instruction
b. MUAP 669_- Private Instruction
c. MUAP 670_- Private Instruction
d. MUAP 6670 Graduate Recital
e. Two ensembles
f. Six (6) hours of music literature courses
V. Group C - Elective Courses (3 hours)

## Courses in Music [MUS]

5000 Special Topics in Music. One, two, or three credits. Study of a topic in music. Topic and prerequisites to be announced.

5100 Independent Study in Music. One, two, or three credits. Intensive study of a chosen subject. An indication of reasonable skill and knowledge of research techniques, writing, and creativity expected.

5270 Music Internship. Three to six credits. Prerequisite: Permission of instructor. Examination and experiences in either the area of music industry, music education, or instrumental or choral conducting. Three credits require 15 hours per week; six credits, 30 hours per week. $\mathrm{S} / \mathrm{U}$ grading.

5570 The Body Intelligent: A Study of the Alexander Technique. Two credits. (Same as THEA 5570.) For those interested in improving ease and freedom of movement, balance, support, flexibility, and coordination in daily activity.

6000 Special Topics in Music. One, two, or three credits. Study of a topic in music. Topic and prerequisites to be announced.

6030 Conducting Problems and Score Interpretation. Three credits. Analysis and marking of scores. Refinement of conducting techniques. Elimination of undesirable conducting habits. Diction as applied to conducting.

6060 Advanced Conducting. Three credits. Techniques in advanced conducting of orchestral, choral, band, and chamber ensembles. Includes irregular meters, score reading, warm-up procedures, conducting patterns, attacks, and releases.

6100 Independent Study in Music. One, two, or three credits. Intensive study of a chosen subject. An indication of reasonable skill and knowledge of research techniques, writing, and creativity expected.

6500 Aesthetics of the Arts. Three credits. The place of aesthetics in philosophy, the properties of music and the visual arts, the alternative and corollary views of the arts, the process of aesthetic creation, and meaning and values in music and the visual arts.

6620 Bibliography and Research. Three credits. Survey of bibliography and problems and methods of research. Analysis and evaluation of research in the arts.

6630 Music Seminar. Three credits. Prerequisite: MUS 6620. Study and research of a topic in music determined by the instructor.

6640 Thesis Research. One to six credits. Types of research in music surveyed. A problem is selected and developed into a thesis report in acceptable form and style. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6999 Comprehensive Examination Preparation. One credit. Open only to students enrolled in another graduate course who will take the master's comprehensive examination during the term. Contact the graduate advisor during the first two weeks of the term for course details and specifics. Credit may not be applied to degree requirements.

## Courses in Applied Music [MUAP]

5020 Private Instruction. Two credits. One hour lesson weekly on one of the various instruments or voice. Offers preparation to entering graduates for the graduate audition. Does not count toward the graduate degree; may be repeated.

5040 Service Playing. Two credits. Skills and knowledge necessary for playing for church services including hymn and anthem accompaniments, conducting from the console, study of liturgical service music, solo accompaniments, and church music materials.

5100 Private Instruction. One credit. Prerequisite: Permission of instructor. One half-hour private lesson weekly on one of the various instruments or voice. May be repeated.

5140 Composition. Two credits. Prerequisite: Permission of instructor. Experience composing original works in numerous media and styles to develop technique and self-expression. May be repeated.

6140/ 6150/6160 Composition. Three credits each. Development of skills and ability in handling musical materials with goals of some individual style or expression within the framework of current practices. Taken in consecutive order. MUAP 6160 may be repeated with no limit, but only three hours of credit may be applied toward the degree.

6670 Graduate Recital. Three credits. Prerequisites: Completion of MUAP 6682 for the collaborative piano specializations; MUS 6030, 6060, and MUAP 6709 for the conducting specialization; the appropriate courses from among MUAP 6681-6688, 6691-6698, and 6701-6708 for the jazz studies and performance specializations; MUAP 6140, 6150, and 6160 for the music composition and music composition for contemporary media specializations; and permission of the appropriate music faculty in all specializations. One-hour private lesson per week in the selected performance field and recital preparation until recital completed. Those specializing in collaborative piano may take course three times.

6680- Private Instruction. Three credits. Prerequisite: Completion 6688 of undergraduate recital. Consult graduate coordinator as to performance area availability. One-hour private lesson per week in the selected performance field. In-depth study of stylistic, technical, and musical problems in music performance and exploration of advanced repertoire in the applied area.
6680 Private Instruction
6681 Private Instruction Voice
6682 Private Instruction Piano
6683 Private Instruction Organ
6684 Private Instruction Brass
6685 Private Instruction Winds
6686 Private Instruction Strings
6687 Private Instruction Percussion
6688 Private Instruction Guitar
6690- Private Instruction. Three credits. Prerequisite: Completion 6698 of undergraduate recital. Consult graduate coordinator as to performance area availability. One-hour private lesson per week in the selected performance field. In-depth study of stylistic, technical, and musical problems in music performance and exploration of advanced repertoire in the applied area.
6690 Private Instruction
6691 Private Instruction Voice
6692 Private Instruction Piano
6693 Private Instruction Organ
6694 Private Instruction Brass
6695 Private Instruction Winds
6696 Private Instruction Strings
6697 Private Instruction Percussion
6698 Private Instruction Guitar
6700- Private Instruction. Three credits. Prerequisite: Completion 6709 of undergraduate recital. Consult graduate coordinator as to performance area availability. One-hour private lesson per week in the selected performance field. In-depth study of stylistic, technical, and musical problems in music performance and exploration of advanced repertoire in the applied area. Course may be repeated with no limit, but only three hours of credit may be applied toward the degree within the nine-hour private instruction requirement.
6700 Private Instruction
6701 Private Instruction Voice
6702 Private Instruction Piano
6703 Private Instruction Organ
6704 Private Instruction Brass
6705 Private Instruction Winds
6706 Private Instruction Strings
6707 Private Instruction Percussion
6708 Private Instruction Guitar
6709 Private Instruction Conducting

## Courses in Music Education [MUED]

5190 General Music in the Middle and Senior High School. Two credits. Introduces graduate students in music education to methods and materials available for teaching general music to students in grades 6-12. Active student participation and observations of music teachers in the school expected.

5210 General Music Program K-6. Three credits. The role of music and music teaching in elementary education; its objectives, methods, materials, and procedures; innovative trends and exemplary practices; evaluative techniques.

5220 Choral Music in the Middle and Senior High School. Two credits. Methods for teaching music to students at the middle and senior high levels (grades 5-12). Topics include recruitment, au-
ditions, repertoire, programming, musical analysis and score preparation, planning rehearsals, rehearsing the choir, classroom management, vocal techniques and musicianship skills, changing voice, and overall management of a choral program. Observation and public school field experiences required.

5230 Secondary School Methods and Materials. Two credits. The role of music and music teaching in secondary education; its objectives, methods, materials, and procedures; innovative trends and exemplary practices; evaluative techniques.

5240 Instrumental Rehearsal Problems. Two credits. Improving teaching in instrumental music classes through a study of rehearsal planning and techniques; the interpretation of music to students; group dynamics.

5250 Advanced Marching Techniques. Two credits. Prerequisite: Marching band class. Further development and application of marching band techniques as utilized in half-time and contest show production. Selection and analysis of the music score.

5260 The Application of Technology to Music Teaching. Two credits. Introduction to music technology and its applications in music education. Topics include electro-acoustical generation of musical sound, synthesis equipment and MIDI networks, sequencing and scoring software, music education instructional software, and recording techniques. Application assignments in the computer lab and reading assignments in references and software and hardware manuals. Students will search for, examine, and log relevant World Wide Web and other Internet sites.

5670 Music for the Young Child. Four credits. Music fundamentals, materials, and methods appropriate for preschool through grades three; pantomine, role playing, improvisation, rhythm, movement, listening, and singing.

6010 Foundations of Music Education. Three credits. Philosophies of music education; meaning in music and aesthetic theories; principles of learning; objectives for music education.

6621 Music Education Research Project. Three credits. Prerequisite: MUS 6620 and completed candidacy form. Study and research of a topic in music education determined by the student.

6632 Contemporary Issues and Research in Music Education. Three credits. Focuses on contemporary issues and research in music education, the current educational landscape, learning theory and music education, curriculum design and assessment, and accountability in music education.

## Courses in Music Ensemble [MUEN]

5000- Ensemble. One credit each semester. Study and public perfor5750 mance of music literature appropriate to the ensemble.

5000 Accompanying
5100 The Band of Blue Marching Band
5110 Symphonic Band
5120 Wind Ensemble
5130 Tennessee Valley Winds
5200 Concert Chorale
5210 Meistersingers
5220 Women's Chorus
5230 Schola Cantorum
5240 MTSU Singers
5250 Opera Workshop
5260 University Chorus
5300 University Orchestra
5400 Jazz Ensemble

5410 Salsa Band
5420 Commercial Music Ensemble
5430 Jazz Combos
5500 Percussion Ensembles
5700 Mixed Chamber Ensemble
5710 Brass Chamber Ensembles
5720 Guitar Chamber Ensembles
5730 Piano Chamber Ensembles
5740 String Chamber Ensembles
5750 Woodwind Chamber Ensembles

## Courses in Music History and Literature [MUHL]

5050 Church Music. Two credits. Survey of church music and various denominational worship traditions, hymnology, graded choir programs, handbell choirs, materials and methods of church music, and administration and organization of church music.

5060 Guitar Literature. Three credits. Basic literature for the guitar from the Renaissance to the present. Analysis, listening, research, performance.

5070 Music History Survey. Three credits. Review of music in history and culture to degree necessary for candidate to pursue work on graduate level. Does not count toward the M.A. in Music. S/U grading.

5130 Survey of World Music. Three credits. A study of selected music of cultures from around the world and here at home. Listening, watching, reading, research, and concert attendance required.

5530 History of Jazz. Three credits. Study of the history and literature of jazz music including African roots, developments, and aspects of style periods, and the contemporary state of jazz. Listening and analysis.

5630 Seventeenth- and Eighteenth-Century Music. Three credits. Prerequisite: Permission of instructor. A survey of Western classical music during the Baroque and Classical periods; emphasis on topics selected by the instructor.

5640 Nineteenth-Century Music. Three credits. Prerequisite: Permission of instructor. A survey of Western classical music during the Romantic period; emphasis on topics selected by the instructor.

5660 American Music. Three credits. Prerequisite: Permission of instructor. A survey of American music from the colonial era to the present; added emphasis on topics selected by the instructor. Examines folk, popular, and art, as well as sacred and secular traditions within their cultural contexts.

5680 Choral Literature. Two credits. Examination of choral literature from the Renaissance to the present. Program selection. Analysis of choral pieces.

5690 Piano Literature. Three credits. Survey of the basic literature of the harpsichord and piano from the eighteenth century to the present. Live performance; analysis and research.

5710 Vocal Literature. Three credits. Basic repertory of Italian airs, German lieder, French art song, and solo vocal works of nationalistic schools, as well as English and American song literature.

5720 Organ Literature. Two credits. A chronological study of organ literature from the Medieval period to the present. Objectives include knowledge of the repertoire and composers and historical perspective of styles and organ building.

5730 Brass Literature. Two credits. A chronological study of brass literature from the Renaissance period to the present. Objectives include knowledge of the repertoire and composers, historical perspective of styles, types, and common performance practice.

5740 Percussion Literature. Two credits. A chronological study of percussion literature from the nineteenth century to the present. Objectives include knowledge of the repertoire and composers, historical perspective of styles, types, and common performance practice.

5750 String Literature. Two credits. A chronological study of string literature from the nineteenth century to the present. Objectives include knowledge of the repertoire and its composers, historical perspective of styles, types, and common performance practice.

5760 Woodwind Literature. Two credits. A chronological study of woodwind literature from the Renaissance period to the present. Objectives include knowledge of the repertoire and composers, historical perspective of styles, types, and common performance practice.

5770 Opera Literature. Three credits. A study of major operatic works and styles. Focuses on composers, librettists, and performers as well as the vocal, musical, and dramatic resources necessary for performance. Listening and analysis of select pieces will be included in student projects.

5780 Chamber Music for Keyboard. Three credits. A study of chamber music written for the piano. Emphasis will be placed on music written during the eighteenth, nineteenth, and twentieth centuries. Listening and analysis of select pieces will be included in student projects.

5790 Orchestral and Wind Ensemble Literature. Two credits. An indepth study of orchestral and wind ensemble repertoire.

5800 Art Music and African Americans. Two credits. A chronological and topical overview of African American musicians and composers and the primary genres of African American art music from slavery to the present.

6040 Twentieth Century Music. Three credits. Styles and compositional techniques found in representative masterworks of the twentieth century from Debussy to present. Analysis, listening, and research.

## Courses in Music Pedagogy [MUPD]

5110 Advanced Brass Pedagogy. Two credits. Advanced study of conceptual, physiological, acoustical, pedagogical methods and materials used in the teaching of beginning, intermediate, and advanced brass students.

5120 Advanced Percussion Pedagogy. Two credits. Advanced study of conceptual, physiological, acoustical, pedagogical methods and materials used in the teaching of beginning, intermediate, and advanced percussion students.

5130 Advanced String Pedagogy. Two credits. Advanced study of conceptual, physiological, acoustical, pedagogical methods and materials used in the teaching of beginning, intermediate, and advanced string students.

5140 Advanced Woodwind Pedagogy. Two credits. Advanced study of conceptual, physiological, acoustical, pedagogical methods and materials used in the teaching of beginning, intermediate, and advanced woodwind students.

5300 Diction for Singers II. Three credits. Lecture demonstration course for familiarization of the International Phonetic Alphabet and correct pronunciation of a variety of texts in English, Italian, German, and French.

5310 Vocal Pedagogy. Two credits. Teaching techniques of the fundamentals of singing. Vocalises and repertoire. Physical aspects of singing.

5320 Piano Pedagogy. Two credits. Various technical and philosophical approaches in teaching piano. Examination of teaching repertory through intermediate level. Supervised teaching through intermediate level.

5330 Organ Pedagogy. Two credits. The principles of teaching organ: manual and pedal techniques, organ methods, and organ repertoire of varying degrees of difficulty and of all period-styles from pre-Bach through twentieth century.

5340 Techniques of Vocal Coaching. Two credits. Methods and techniques necessary for vocal coaching in a professional setting. Topics include the German Fach system, effective rehearsal techniques, playing of orchestral reductions, sight-reading, and repertoire building. Listening and in-class coaching sessions included.

5350 Guitar Pedagogy. Two credits. Study of the theoretical and practical bases of teaching guitar.

6330 Jazz Pedagogy and Program Administration. Three credits. Indepth study of materials and techniques for teaching jazz at the high school and college level. Rehearsal techniques and identification of and solutions to performance problems. Study of the development and implementation of a successful jazz studies program including educational jazz festival administration.

6340 Woodwind Teaching. Two credits. Seminar on problems encountered in advanced instruction of woodwinds. Experimentation and performance involving old and new concepts of performance.

6350 Brass Teaching. Two credits. Teaching materials for trumpet, cornet, horn, trombone, baritone, and tuba; elementary and advanced exercises, etudes; methods for class and private instruction, clef and transposition studies, orchestral and band repertoire. Survey of sources providing announcement and evaluation of new materials.

## Courses in Music Theory [MUTH]

5010 Theory Survey. Three credits. A review of musicianship skills and knowledge of musical theory to the degree necessary for the candidate to pursue work at the graduate level. Does not count toward the M.A. in Music. S/U grading.

5180 Improvisation. Two credits. Lecture demonstration course exploring improvisation, musical vocabularies, and shorthands including figured bass, Nashville shorthand, and other contemporary styles of writing and performing.

5190 Principles and Practices of Electronic Music. Three credits. Includes history and techniques, acoustics, electronic sound generation, recording, operation of audio equipment, basic principles of composition, and experience with tape recorders and a music synthesizer. Open to nonmusic majors with permission of instructor.

5270 Choral Arranging. Two credits. The fundamentals of arranging musical works for vocal ensembles of various sizes, combinations, and skill levels.

5280 Advanced Jazz Arranging. Three credits. Prerequisite: MUTH 4170. Advanced analysis and arranging for various combinations of instruments and voice for small and large jazz ensembles. Periods, performance practices, stylistic features, and artists.

5290 Electronic Music II. Three credits. Prerequisite: MUTH 5190. Advanced principles of digital sound synthesis, programming the digital synthesizer, electronic composition, contemporary trends in digital music, and programming with a MIDI work station.

5590 MIDI Studio Techniques. Three credits. Prerequisites: RIM/ MUTH 4290 and RIM 4400 or permission of instructor. MIDI systems design and the total integration of all MIDI-controllable devices. SMPTE and MIDI Time Code and their application to tape synchronization. A continuation of advanced techniques for digital sampling, sequencing, sound manipulation, and use of alternate controllers. Other topics include sound effects and music scoring for film and video, and the MIDI Machine Control and MIDI Show Control specifications. Laboratory required.

6050 Analytical Techniques. Three credits. Prerequisite: MUTH 5010 or permission of instructor. Skills and procedures of musical analysis as they apply to all periods through analysis of representative compositions. Evaluation of work from all standpoints: craftsmanship, expression, and stylistic correctness.

6060 Advanced Improvisation. Three credits. Exploration of the art of improvisation. Emphasis on advanced harmonic and melodic principles and on the development of a personal style. Listening and analysis of solos by great jazz artists and in-class performances of student projects and improvisations.


# Department of Recording Industry 

Christian Haseleu, Chair<br>Bragg Mass Communication 251

The Department of Recording Industry offers courses at the graduate level. These courses are primarily intended as a cognate or electives for M.B.A. or other graduate students.

## Courses in Recording Industry [RIM]

6300 Recording Industry Economics. Three credits. Prerequisite: ECON 6030 or equivalent. Focuses on macro- and microeconomic issues and analysis of the recording industry, with particular attention to market/demand analysis, economics of the firm, and political economic issues.

6630 Applied Recording Industry Research. Three credits. Prerequisites: Q M 6000; MKT 6000; acceptance to M.B.A. program. Focuses on applied qualitative and quantitative research projects for the recording industry, with particular attention to research design and implementation.


# School of Nursing 

Lynn C. Parsons, Director<br>Cason-Kennedy Nursing Building 201

The School of Nursing offers the Master of Science in Nursing (M.S.N.) through the Regents Online Degree Program (RODP) and graduate certificates in Critical Care Nursing and Nursing Informatics.

## Master of Science in NursingRegents Online Degree Program (RODP)

The Master of Science in Nursing Degree (M.S.N.) is offered through the Regent's Online Degree Program (RODP), and is delivered following the standard protocol established for the delivery of RODP courses and programs. The program includes four concentrations: Nursing Education, Nursing Administration, Nursing Informatics, and Advanced Practice. Courses are offered each semester (Fall, Spring, and Summer) through all six Tennessee Board of Regents universities. The program requires completion of 32-45 semester credit hours depending on the concentration. For more information, please contact Karen Ward at (615) 898-5622 or visit www.tn.regentsdegrees.org/msn/.

## Requirements for the <br> Critical Care Nursing Certificate

A graduate certificate in Critical Care Nursing is offered to meet the expanding and changing educational needs of critical care nurses in middle Tennessee. The program provides a high-quality, in-depth curriculum including core concepts, advanced concepts, and critical thinking skills. The rapidly changing components of critical care such as diagnostic tools, therapies, and technologies are incorporated into the curriculum.

The goal of the graduate certificate program in Critical Care Nursing is to provide advanced knowledge and critical thinking skills to prepare the professional nurse to manage patients with complex health problems in the critical care environment.
In addition to the University standards required for admission to the College of Graduate Studies, the admissions requirements include

1. Minimum of baccalaureate degree in nursing
2. Current licensure as a registered nurse

A total of 18 semester hours is required for completion of the graduate certificate program. It may be possible to complete all coursework online excluding clinical labs. An individualized program of study is developed to meet the needs of the adult learner.

The objectives of this certificate program are

1. to enhance knowledge and skills in critical care nursing concepts, including physiology of major organ systems, pathophysiology, and management of organ/system dysfunction.
2. to expand knowledge in electrophysiology, including basic, intermediate, and advanced cardiac arrhythmias and 12-lead, 15 -lead, and 18-lead electrocardiography.
3. to expand the professional nurse's knowledge of physical assessment with emphasis on abnormalities in the critically ill patient.
4. to broaden perspectives related to core critical care skills such as hemodynamic monitoring, mechanical ventilatory support, and continuous renal replacement therapy.
5. to develop and refine the professional nurse's critical thinking skills applied to complex patient problems.

## Requirements for the Nursing Informatics Certificate

A graduate certificate in Nursing Informatics is offered to prepare baccalaureate nurses functioning in informatics-related roles with the additional skills and knowledge related to the practice of nursing informatics and to prepare advanced practice nurses with the skills and knowledge for leadership in emerging informatics roles within health care organizations.
Terminal objectives for the Informatics Certificate reflect components of the published Standards and Scope of Practice for the Informatics Nurse Specialist as published by the American Nurses Association (ANA) in 2001. The Nursing Informatics certificate program provides students an opportunity to

1. incorporate theories, principles, and concepts from appropriate sciences into informatics practice such as information technology, systems and change theories; understand implementation methods, organizational culture, and database structure.
2. integrate ergonomics and human-computer interaction principles into informatics solution, design, selection, implementation, and evaluation.
3. systematically determine the social, legal, and ethical impacts of an informatics solution with nursing and health care.

If a student who wishes to pursue the Informatics Certificate does not possess the basic informatics skills needed by all beginning nurses as outlined by the ANA, an introductory undergraduate/graduate course in nursing informatics is required. A competency-screening tool will be utilized to assist students in their decisions to pursue a preparatory information management course prior to beginning the certificate program of study. Candidates should have

1. computer literacy skills in the areas of basic word processing, database, spreadsheet, presentation, and applications to document patient care delivery and be able to communicate electronically.
2. information literacy skills that allow the nurse to locate, evaluate, and use information appropriately.
3. an understanding of economic, legal, and social issues surrounding the use of information and access.
4. the ability to identify, collect, record, and interpret data related to the care of patients using informatics applications.
5. the ability to implement public and institutional policies related to privacy, confidentiality, and security of information.

Courses identified for this program are taught primarily online with periodic campus meetings for some courses to facilitate the learning process and provide opportunities for hands-on technology interaction. Courses are developed in a manner that will allow students to learn and work independently and interactively with other students and faculty.
The Informatics Certificate program can be completed in 17 semester hours. Students will be expected to have Internet access via a computer that meets minimum criteria deemed necessary for course requirements as well as a personal digital assistant (PDA).

## Courses Transferred to Other Programs

The School of Nursing also offers selected graduate courses which may be transferred to programs offering the Master of Science in Nursing. Additional courses which meet the requirements of the State of Tennessee Board of Nursing for a Certificate of Fitness to practice as an Advanced Nurse are also planned. Please contact the School of Nursing for further information.

## Courses in Nursing [NURS]

5035 Special Topics. Three credits. Graduate students explore selected nursing topics in depth. A specified topic will be offered each semester according to student interest and faculty availability.

5055 Informatics for the Health Care Professional. Three credits. Present and potential impact of health care and nursing informatics on the nursing and allied health care disciplines and how informatic tools and systems can assist in providing solutions to health care education and practice. Emphasis on the provider's role as a leader and advocate in this rapidly emerging field.


6091 Critical Thinking - A Case-Based Approach. Three credits. Casebased tutorials used to integrate anatomy, physiology, pathophysiology, assessment, and management concepts in patients with select critical illnesses. Graduate students guided through the steps of critical thinking, with emphasis on identification of patient problems, prioritizing needs, determining short-term and long-term goals, anticipating therapeutic interventions, and initiating appropriate nursing care. Select critical problems include sepsis, congestive heart failure, renal failure, diabetic ketoacidosis, cardiogenic shock, bleeding esophageal varices, respiratory failure in patient with chronic lung disease, coronary artery bypass surgery, and thermal injury.

6101 Advanced Health Assessment. Three credits. Prerequisite: Undergraduate adult physical assessment course. Physical assessment skills and clinical practice related to evaluation of the health status of the adult client. Refines physical assessment skills learned at the undergraduate level. Predictable pathological findings and the mechanisms underlying these findings in selected diseases. Emphasis on differentiating normal and abnormal findings and on techniques used to distinguish the abnormal. Two lecture hours and two clinical hours per week.

6103 Advanced Pathophysiology. Three credits. An exploration and analysis of scientific knowledge relevant to selected pathophysiological states confronted in health care management. Basis for the foundation of clinical decisions related to selected diagnostic tests and the initiation of therapeutic regimens. Pathophysiology across the lifespan correlated with clinical diagnoses and management.

6104 Advanced Pharmacology. Three credits. Advanced pharmacokinetics and pharmacodynamics of commonly used drug categories analyzed in depth with consideration to safe, quality, cost effective drug therapy for client care. Emphasis on pharmacologic therapy management by nurse clinicians in independent and collaborative practice for clients across the lifespan. Prescriptive guidelines included.

6401 Informatics and Information Management. Two credits. Prerequisite: Permission of department. Provides an overview of nursing informatics and the theoretical foundation for information management within the health care setting. Explores the impact of automated data management through advances in information technology, health care information systems, and telehealth.

6402 Health Care Information Systems. Three credits. Prerequisite: Permission of department. Introduces concepts upon which health care information systems are developed, implemented, and maintained. Operating systems, networking concepts, security issues, and workstation design and evaluation related to the health care environment addressed.

6403 Analysis and Design of Health Care Information Systems. Three credits. Prerequisite: NURS 6402. Offers knowledge and skills for implementing and evaluating health care information systems in practice. Informatics models, conceptual frameworks, and practice activities discussed.

6404 Evaluation of Health Care Information Systems. Three credits. Prerequisite: NURS 6403. Application of advanced health care information systems and emerging technology.

6405 Health Care Data Analysis Techniques. Two credits. Prerequisite: Permission of department. Principles of data collection, organization, and statistical analysis and interpretation covered. Opportunity to review complex applications for data mining and reporting within health care environment.

6406 Trends in Health Care and Technology. One credit. Prerequisite: Permission of department. Examines the newest trends in health care technology.

6407 Informatics Applications I. Two credits. Corequisite: NURS 6403. Builds on concepts and technology introduced in other related informatics coursework to provide additional experiences in informatics applications in health care settings. Explores a variety of informatics applications.

6409 Informatics Applications II. Two credits. Pre- or corequisite: NURS 6404. Builds on the concepts and technology introduced in other related informatics coursework to provide additional experiences in informatics applications in health care settings. Explores a variety of informatics applications and identifies specific informatics applications based on practice needs.

6521 Advanced Concepts in Critical Care. Three credits. Focuses on advanced concepts related to multi-organ/system function and dysfunction. Physiology, assessment, pathophysiology, system failure, and clinical management of the endocrine and defense systems addressed. Detailed overviews of multisystem dysfunction in shock, trauma, and burns used to integrate core concepts with more complex pathophysiology and advanced treatment modalities.

6522 Core Concepts in Critical Care - Part I. Two credits. Focuses on the interrelatedness of major organ systems in health and disease. Physiology, pathophysiology, system failure, and clinical management integrated to provide advanced knowledge necessary to deliver care to critically ill patients. Includes cellular metabolism, the neurological system, the gastrointestinal system, and the hepatic system.

6523 Core Concepts in Critical Care - Part II. Two credits. Focuses on the interrelatedness of major organ systems in health and disease. Physiology, pathophysiology, system failure, and clinical management integrated to provide advanced knowledge necessary to deliver care to critically ill patients. Includes the cardiovascular system, the hematologic system, and electrolyte balance.

6524 Core Concepts in Critical Care - Part III. Two credits. Focuses on the interrelatedness of major organ systems in health and disease. Physiology, assessment, pathophysiology, system failure, and clinical management integrated to provide advanced knowledge necessary to deliver care to critically ill patients. Includes the renal and respiratory systems and acid base balance.

6525 Electrocardiography for Critical Care Nurses. Three credits. A systematic approach to the interpretation of cardiac dysrhythmias and 12-lead electrocardiographic abnormalities. Disturbances of automaticity and conductivity are summarized, including electrocardiographic characteristics, hemodynamic consequences, and therapeutic interventions of sinus, atrial, junctional, and ventricular arrhythmias and conduction abnormalities. An overview of 12-lead, 15-lead, and 18-lead electrocardiograms is presented as a foundation for recognizing abnormalities, such as myocardial infarction patterns and bundle branch blocks.

6529 Advanced Critical Care CNS Practicum. Four credits. Combines clinical practice with case-based tutorials to integrate concepts in the care of patients with select critical illnesses. Students guided through steps of critical thinking, with emphasis on identification of patient problems, prioritizing needs, determining shortterm and long-term goals, anticipating therapeutic interventions, and initiating appropriate nursing care.

# Department of Sociology and Anthropology 

Edward Kick, Chair<br>Peck Hall 316

The Sociology and Anthropology Department offers the Master of Arts with a major in Sociology and a minor in sociology at the graduate level.

## Requirements for the Master of Arts

## Admission Requirements

Full admission for a degree-seeking candidate: Receipt of all materials by April 1 for Fall admission, September 15 for Spring admission. A complete application includes application, letter of interest and goals, an example of written work, three letters of recommendation, all transcripts, at least a 2.75 GPA, acceptable GRE scores, and the successful completion of at least 18 hours of undergraduate sociology which includes the prerequisites of research methods (SOC 3040), statistics (SOC 3050), and sociological theory (SOC 3060), or their equivalents. A grade of C or better must be earned in the prerequisite courses.

Conditional admission for a degree-seeking candidate: Conditional admission is possible, but not guaranteed, under the following circumstances: (a) GRE score is less than acceptable (exception is dependent upon the strength of the other admission criteria); (b) Prerequisites are missing or the grade is less than a C. All prerequisites must be completed within the next year following this conditional admission and prior to enrollment in the twelfth hour of graduate study. If these conditions are not met, the candidate will be dropped from the program and must seek readmission in a subsequent semester; (c) GPA is less than 2.75 (exception is dependent upon the strength of the other admission criteria).

## Degree Requirements

## Candidate must

1. complete a minimum of 36 semester hours in graduatelevel courses, 24 of which must be graduate-level sociology courses with no more than 9 of the 36 hours duallisted as undergraduate/graduate hours (4000/5000).
2. complete all required courses, including SOC 6560, 6620,6720 , and 6660 or 6010 with a minimum grade of $B$-.
3. complete 6 hours of thesis research (SOC 6640) and submit and successfully defend a thesis.
4. file a Candidacy Form with the Graduate Office prior to the completion of 24 credit hours.
5. successfully complete a written comprehensive examination.

## Graduate Assistantship Application

Applications are due by April 1. Applicant must meet the following conditions: (a) be admitted to the M.A. program in sociology and (b) have an undergraduate GPA of at least 3.00 OR a graduate GPA of at least 3.00 over a minimum of 9 hours of completed graduate courses.

## Courses in Sociology [SOC]

5010 Social Inequality. Three credits. The origins, variations, and consequences of class, status, and power in society. Includes individual and group economic interests, social prestige, ideology, market, and institutional inequality.

5050 Sociology of Families. Three credits. An analysis: contemporary American family patterns; racial, ethnic, and class variations.

5100 Sociology of Work. Three credits. Comparative analysis of work structure and processes in organizational contexts, including study of management and employee organizations and legal environments regulating workplace relations.

5140 Violence in the Family. Three credits. (Same as CDFS 5140.) Causes, dynamics, and consequences of violence in the family. Includes the discussion of violence toward children, spouses, dating partners, siblings, and elders. Emphasizes the social conditions which lead to these types of violence.

5150 Topics in Sociology. Three credits. An in-depth topic significant in current sociological literature.

5160 Sociology of Gangs. Three credits. Prerequisite: SOC 1010. History of gangs in the U.S., the factors which account for their formation and perpetuation, and current empirical data on gang composition, demographics, and culture. Policy strategies for prevention, law enforcement, and nonlegal interventions assessed.

5170 The Social Context of Southern Music. Three credits. A sociohistoric analysis of Southern music providing a framework for examining the relationship between culture and popular culture, the production of popular culture, and popular culture as a vehicle for examining social issues of the southern region.

5240 Race and Ethnic Relations. Three credits. Theories and dynamics of intergroup relations in a multiethnic society.

5300 Criminology. Three credits. Theories of the causes of criminal behavior and coverage of its development and incidence; punishment and methods of control and rehabilitation.

5320 Public Opinion and Propaganda. Three credits. (Same as P S 5320.) Public opinion and its role in the political and social processes.

5360 Medical Sociology. Three credits. Sociological analysis of health care delivery including problems, policies, and issues faced by recipients and providers of care. Focuses on the U.S., role theory, and demographics.

5500 Social Psychology. Three credits. Individual behavior in social contexts and symbolic interaction among groups. Includes social influences on perception, conformity, attitudes, communication, group structure, leadership, and role behavior.

5510 Social Movements and Social Change. Three credits. Sociological theories of revolutions, rebellions, civil wars, and protest movements of the past and present and the relationship to significant social changes.

5520 Population and Society. Three credits. Prerequisites: SOC 1010 and 2010 or permission of instructor. Examines world and U.S. population trends and the impact of social forces on such demographic variables as births, deaths, migration, age, sex, education, marital status, and how these impact social conditions.

5540 Juvenile Delinquency. Three credits. Social factors related to delinquency including family, peer group, school, and community. Includes the juvenile justice system and its agents.

5550 Sociology of Religion. Three credits. Religion as social process and institution. An ideological, structural, and functional analysis. Specific U.S. religions examined in detail.

5560 Organizational Structures and Processes. Three credits. Analysis of structure and processes of change, organizational environments, modes of power, ideologies, forms of control and resistance, including alternatives to bureaucracy.

5660 Urban and Community Studies. Three credits. Prerequisites: SOC 1010 and 2010 or permission of instructor. Focuses on concept of community as a core idea in the historical development of sociology, concentrating on theories and historical trends of urbanization and current urban problems and policies.

5790 Sport and Society. Three credits. (Same as REC 5790.) Behavioral approach to the sport and leisure phenomena from the related perspectives of sociology and anthropology.

5800 Special Projects. One to three credits. Field experiences or reading courses through which special interests or needs of the student may be pursued under individual supervision. No more than three hours may be used in the major. Arrangements must be made with instructor prior to registration.

6000 Comparative Social Change. Three credits. (Same as P S 6000.) A historical comparative examination of the structure, institutions, and development of the modern world system; a review of major theoretical and empirical research on the world system.

6010 Social Policy Analysis. Three credits. A historical comparative examination of social policy formulation, structure, and consequences. Focus on policy formation in modern and developing nations. Critical analysis of social policy development.

6460 Classical Sociological Theory. Three credits. Prerequisite: SOC 3060 or equivalent. Emphasis on history, analysis, and theory construction of early to mid-twentieth-century social thinkers.

6510 Independent Study. Three credits. Recommended for students past the midpoint in their master's programs. Designed to provide an opportunity to fill perceived gaps in the program of study and as precursor for the thesis.

6540 Topics in Crime and Deviance. Three credits. Critical analysis of selected topics in the fields of crime and deviance. Students
pursue individual projects that require integration of their theoretical understanding with contemporary applications.

6560 Thinking Sociologically. Three credits. Prerequisite: SOC 3060. Encourages students to think sociologically, integrating theoretical knowledge with a critical examination of everyday experiences and social problems/issues. Addresses both classical and contemporary theories: structural, interpretive, micro and macro applications.

6570 Seminar in Advanced Social Psychology. Three credits. The dynamics of human interaction: attitudes, processes, group structures, settings, and properties.

6620 Applied Quantitative Research Design. Three credits. Prerequisites: SOC 3040 and 3050 or equivalent. Focuses on the design and application of quantitative data collection and analysis procedures to practical problems and issues. Students pursue supervised independent design and analysis using SPSS or SAS.

6630 Seminar in the Family. Three credits. Principles of family organization; family as a sociocultural institution in various societies; theories of family structure, change, and deviance.

6640 Thesis Research. One to six credits. Prerequisite: Student must have filed Candidacy Form and selected thesis committee before enrolling. Selection of a research problem, review of pertinent literature, collection and analysis of data, and composition of thesis. Once enrolled, student should register for at least one credit hour of master's research each semester until completion. $\mathrm{S} / \mathrm{U}$ grading.

6650 Contemporary Social Issues. Three credits. An in-depth investigation of a particular sociological issue or subdiscipline. A maximum of six hours may be credited to one's major.

6660 Program Management and Evaluation. Three credits. Prerequisite: SOC 3040 or permission of instructor. Methods and issues of applied, client-centered project research. Topics include evaluation methods, proposal construction, project management, report writing and presentation techniques, aggregate data, negotiation techniques, ethical and legal considerations, and social change agency.

6690 Death and Survivorship. Three credits. The social complexities of dying, death, and survivorship with particular emphasis given to the aging population.

6700 Introduction to Community and Regional Development: An Interdisciplinary Seminar. Three credits. Analysis of the problems and proposed solutions of community development from an interdisciplinary point of view.

6710 Japanese Society and Business. Three credits. (Same as ECON 6540.) Japanese economy, business practices, and social and physical environment in comparison with those in other countries, particularly the United States.

6720 Applied Qualitative Research Design. Three credits. Prerequisites: SOC 3040 and 3050 or equivalent. Focuses on the design and application of qualitative data collection and analysis procedures to practical problems and issues. Students pursue supervised independent and group projects.

6900 Practicum: Applied Analysis. Three credits. Prerequisite: SOC 6620 and permission of instructor. Supervised independent study in which student is placed in an organization on a contractual basis. Course directed toward student pursuing career in applied sociology.

## Courses in Anthropology [ANTH]

5120 Practicing Anthropology. Three credits. Culture change theory and the practical dimension of anthropology in research and planned change implementation.

5740 Law and Politics in Traditional Societies. Three credits. Law and methods of social control in primitive societies. Emphasis on the importance of a cross-cultural perspective for understanding Western political behavior.

5750 Anthropology of Religion. Three credits. Cross-cultural exploration of religion, including beliefs in the supernatural, the use of ritual in secular and sacred context, and the roles of ceremonial practitioners. Focuses on how people interpret and control their worldviews through religion and ritual.

5751 Ritual. Three credits. Ritual in sacred and secular contexts. Examination of function and logic of ritual in social systems.

5890 Seminar in Anthropological Theory. Three credits. Prerequisites: 18 hours of anthropology, including ANTH 2010, 3210, 3310, 3410. A critical examination of the major anthropological theories within their historical, cultural, and political context.


5910 Special Projects. One to six credits. Experience in research through which special interests or needs of the student may be pursued under individual supervision. Arrangements should be made with an instructor prior to registration.

5940 Ethnographic Field School. Three to six credits. Field experience in a cross-cultural setting. Training in ethnographic research techniques.

5950 Archaeological Field School. Three to six credits. Basic techniques of archeology and paleoecology through participation in actual excavation and laboratory work.

## Courses in Aging Studies [SOC]

5020 Sociology of Aging. Three credits. Demographic, social, and cultural aspects of aging. Emphasis on the types of problems encountered by older persons in American society.

5030 Topics in Gerontology. Three credits. An opportunity to integrate gerontological theory and research techniques in working with the practical problems of older persons.

5040 Health Care Delivery Issues. Three credits. An assessment of critical issues with special emphasis on policies, procedures, and intervention strategies in long-term care settings.

5090 Health Care Management. Three credits. Details of the technical aspects of health care management with an emphasis on long-term care settings.

5800 Special Projects. One to three credits. Experiences in research through which special interests or needs of the student may be pursued under individual supervision. Arrangements should be made with an instructor prior to registration.

6550 Seminar on Aging. Three credits. In-depth investigation of selected topics in social gerontology.

6670 Mental Health and Aging. Three credits. The basic concepts associated with mental health and the aging process. The epidemiology, assessment process, and approaches to treatment stressed. A positive approach to the mental well-being of the older adult provided.

6680 Counseling Elders. Three credits. Prerequisite: SOC 6670 recommended but not required. Counseling techniques and outcomes common to late life therapy. Special application to specific problems and social environments of the elderly.

Courses from communication disorders, human sciences, psychology, and recreation are to be used in conjunction with these sociology courses to complete the requirements for a multidisciplinary minor in Aging Studies. Students should consult their advisors for specific courses from the various departments.

# Department of Speech and Theatre 

## Russell Church, Chair Boutwell Dramatic Arts 205

The Department of Speech and Theatre offers a minor at the graduate level.

## Courses in Communication [COMM]

5000 Communication in the Educational Environment. Three credits. For the classroom teacher. Successful communication strategies applicable to the classroom environment.

5040 Debate Across the Curriculum: Practicum. Three credits. Prerequisite: COMM 3210. Advanced techniques and methods for using argumentation and debate in teaching core curriculum in upper elementary and secondary school classes and developing intrascholastic debate and interscholastic debate activities. Practicum experiences provided.

5210 Argumentation. Three credits. The theory and practice of advocacy speaking with emphasis on organization, refutation, reasoning, and rebuttal. In-class debating on questions of fact, value, and policy.

5220 Small Group Communication. Three credits. Prerequisites: COMM 2200, 2300, or permission of department. Theories of group dynamics and practical application. Study and practices of leadership in groups as decision-making organizations.

5230 Advanced Public Speaking. Three credits. Prerequisite: COMM 2200 or permission of the instructor. Application of the principles of public speaking through analysis and criticism of speech structure and delivery of classroom speeches.

5260 Readings in Speech Communications. Three credits. Prerequisite: Permission of instructor. Intensive work in a specific area of speech communication; topic is chosen in instructor-student conference.

5280 Political Communication. Three credits. Selected outstanding speakers and their techniques of speech communication.

5320 Theories of Persuasive Communication. Three credits. Recent writing and research on theories of oral persuasion and on current practices of persuasion. Emphasis on the ethical, critical, cultural, and functional implications in contemporary persuasion theory and practice.

5560 Intercultural Communication. Three credits. Dynamics of the communication process as it functions in intercultural contexts; training for successful cross-cultural communication interactions.
which the principles of effective communication and/or dramatic production are applied.

5710 Senior Seminar in Speech Communication. Three credits. Intensive investigation of the major research methodologies in speech communication, presentation of senior projects, and a synthesis of the speech communication discipline.

5800 Special Topics in Speech Communication. One to three credits. Designed to meet individual and group needs for advanced study in speech communication. Topic to be determined at time of scheduling. A maximum of six semester hours may be applied toward a degree.

## Courses in Communication Disorders [CDIS]

5000 Language Development, Speech, and Literacy. Two credits. Introduces development of language, language production, and language perception, and how these processes are related to literacy development. Stages of language development, reading acquisition, word recognition, and language and reading disorders.

5050 Introduction to Communication Disorders. Three credits. Overview of the most common disorders of hearing, speech, and language and intervention measures.

5150 Phonetics. Three credits. Training in the recognition and production of the sounds of speech with an analysis of their formation; extensive practice in phonetic transcription.

5200 Phonological Disorders. Three credits. Prerequisites: CDIS 3050/5050 and 3150/5150. Speech development, etiologies of phonological/articulatory problems, and approaches for assessing and remediating speech-sound errors.

5250 Speech and Language Development. Three credits. Child speech and language acquisition from birth to seven years of age. Emphasis on normal linguistic development.

5300 Clinical Methods in Communication Disorders. Three credits. Prerequisites: CDIS 3050/5050, 3150/5150, 3200/5200, and 3250/5250 for majors. Planning and implementing treatment programs for individuals with communication disorders; a foundation for clinical practicum.

5350 Hearing Problems and Testing. Three credits. The etiologies and diagnoses of hearing problems and practical experiences in administering audiometric examinations.

5400 Anatomy and Function of the Speech Mechanism. Three credits. Structures and functions of the speech mechanism.

5450 Fluency Disorders. Three credits. Prerequisite: CDIS 3050/5050. Etiologies, assessment, and treatment of fluency disorders.

5500 Training for the Hearing Impaired. Three credits. Prerequisites: CDIS 3050/5050, 3250/5250, and 3350/5350. Materials and methods employed in training the hearing impaired.

5550- Practicum in Speech-Language Pathology I. Three credits each.
5580 Prerequisites for 5550: 3300/5300, prior semester application, and completion of academic and professional criteria established by the faculty. Prerequisites for 5560, 5570, and 5580: CDIS 4550/5550, 4560/5560, and 4570/5570 respectively. Supervised clinical practice in the University clinic.

5600 Practicum in Speech-Language Pathology II. Three credits. Prerequisites: CDIS 4550/5550 and 4560/5560, prior semester ap-
plication, and approval by faculty. Advanced supervised clinical practice in an off-campus clinical facility.

5650 Practicum in Speech-Language Pathology III. Six credits. Prerequisites: CDIS 4550/5550, 4560/5560, 4570/5570, and prior semester application, and approval by faculty. Organization, management, and implementation of public school speech-language and hearing programs. Public school course and advanced supervised clinical practice in a public school setting.

5700- Practicum in Audiology. One credit each. Prerequisites for 5700:
5730 CDIS 3350/5350 and 4550/5550 or permission of instructor. Prerequisites for 5710,5720 , and $5730: 5700,5710$, and 5720 respectively. Laboratory course in applying principles of audiology.

5750 Advanced Audiology. Three credits. Prerequisite: CDIS 3350/ 5350. Development of advanced skills in the evaluation and remediation of hearing problems.

5800 Speech, Language, and Auditory Problems of the Aged. Three credits. Overview of the impact of age on communication. Identification and remediation of communication problems associated with the aging process.

5850 Communication Problems in Children. Three credits. Prerequisites: CDIS 3400/5400 and 4550/5550 or permission of instructor. A comprehensive study of the speech, language, and voice difficulties experienced by children.

5900 Diagnostic Procedures in Speech Pathology. Three credits. Prerequisites: CDIS 4550/5550 or permission of instructor. Basic concepts of measurement and application of diagnostic procedures used in speech-language pathology.

5950 Special Topics in Communication Disorders. Three credits. Advanced reading and discussion seminar in speech-language pathology or audiology.

## Courses in Dance [DANC]

5010 Dance Performance II. One credit. All aspects of concert planning and production as performer and crew member. May be taken for two semesters.

5100 Choreography I. Three credits. Prerequisite: PHED 2080 or equivalent. Exploration of movement, technique sequences, and choreographic forms; basic elements of Labanotation.

5120 Dance Therapy. Three credits. The use of movement in helping to reduce physiological, psychological, and sociological aberrations. Designed to help the classroom teacher or specialist working with children who have these problems.

5130 Dance for the Theatre. Three credits. Prerequisites: PHED 1010, 1020, 2160, 2180, and 2190 or equivalent. Techniques of dance for musicals, comedies, opera, television, and stage and choreography for these forms.

5160 Advanced Ballet - Individual Study, Solo and Ensemble Performance. Three credits. Refine and polish ballet skills at the advanced level leading to performance in classical and contemporary styles.

5170 Advanced Ballet - Individual Study and Choreography. Three credits. Concentrates on choreography for solo and ensemble performance in both classical and contemporary styles.

5700 Skills and Techniques of Teaching Rhythmic Activities. Three credits. (Same as PHED 5700.) Various dance forms, methods and materials, evaluative procedures, and experiences in teaching all forms of dance to students at the K-12 level.

5760 Choreography II. Three credits. Exploration of choreographic techniques to develop an original group dance and the execution of plans for costumes, lighting, and makeup.

5770 Advanced Modern Dance. Three credits. Prerequisite: PHED 2080 or equivalent. Techniques, choreography, and various aspects of Labanotation for the experienced dancer and choreographer.

## Course in Organizational Communication [ORCO]

5240 Organizational Communication. Three credits. Emphasis on communication problems in contemporary organizations and ways and means of resolving such problems.

## Courses in Theatre [THEA]

5100 Special Effects Make-up. Three credits. Prerequisites: THEA 3100 or permission of instructor. Orientation to special effects make-up design, techniques and design realization through make-up projects, and research for various performance venues with a focus on student career and portfolio development.

5220 Theatrical Costume Design for Arts and Entertainment. Three credits. Prerequisite: THEA 3200 or permission of instructor. Costume design in the performing arts; an orientation to the costume application of design and development principles through costume design projects developed through research for various performance venues with a focus on student career and portfolio development.

5240 Theatrical Costume History. Three credits. Prerequisite: THEA 3200 or permission of instructor. An advanced course incorporating all aspects of costume production in the performing arts focusing on historical research, historical reproduction methods, construction design, resource management, creative problem solving, and portfolio and resume development. Laboratory hours required.

5290 Topics in Theatrical Costume. One to three credits. Prerequisite: THEA 3200 or permission of instructor. Designed to meet individual and group needs for advanced study in theatrical costume. Topic to be determined at time of scheduling.

5300 Scene Design. Three credits. Prerequisites: THEA 2110 or permission of instructor. Lecture and practical experience in planning and designing stage settings. Emphasis on forms and styles of scenery, historical period research, designers, and new theatrical materials, methods, and techniques. Major projects in set design. Laboratory hours and/or crew requirement.

5350 Advanced Scenic Design. Three credits. Prerequisites: THEA 2110 and 3300 or permission of instructor. Advanced methods and theories of scenic design. Strong emphasis on practical projects, the design process, and critical methods of study. Components on design history and theory/criticism.

5390 Topics in Scenography. One to three credits. Prerequisites: THEA 2110 and permission of instructor. Designed to meet individual and group needs for advanced study in theatre. Topic to be de-
termined at time of scheduling. A maximum of six semester hours credit may be applied toward a degree.

5400 Stage Lighting. Three credits. Lectures and practical experience in methods and techniques. Emphasis on developing plots through knowledge of electricity, circuitry, instrumentation, and control equipment. Major projects in lighting design. Laboratory hours and/or crew requirement.

5450 Advanced Stage Lighting. Three credits. Prerequisite: THEA 3400 or permission of instructor. Advanced methods and theories of lighting design. Strong emphasis on practical projects, design process, and critical methods of study. Includes components on design history and theory/criticism.

5500 Advanced Acting. Three credits. Prerequisite: THEA 2500 or permission of instructor. The development of advanced skills in the ability to analyze and interpret the more complex characters in drama. Study of classical acting styles.

5570 The Body Intelligent: A Study of the Alexander Technique. Two credits. (Same as MUS 5570.) For those interested in improving ease and freedom of movement, balance, support, flexibility, and coordination in daily activity.

5600 Storytelling. Three credits. Instruction and experiences in storytelling in educational, corporate management, and performance contexts. Investigation of influence of storytelling on culture, organizational behavior, leadership, and education.

5610 Theatre in Education. Three credits. For current and prospective teachers. Integration of drama across the curriculum. The creation, construction, performance, and touring of a play for elementary school children.

5620 Drama Across the Curriculum: Practicum. Three credits. Prerequisite: THEA 3600. Advanced techniques and methods for teaching core curriculum in upper elementary classes using drama and role playing. Practicum experiences provided.

5650 Children's Drama and Speech. Three credits. Creative dramatics, children's theatre, puppetry, mask-making. Motivational, selfdirected learning through creative and performance arts.

5700 Fundamentals of Play Directing. Three credits. Prerequisite: THEA 2500 or permission of instructor. Director as literary analyst and production critic. Play analysis, production concepts, staging theory and techniques, rehearsal methods and procedures. Scene work.

5750 Advanced Play Directing. Three credits. Prerequisite: THEA 5700 or permission of instruction. Case studies and problem solving of rehearsals and production. Director's relationship with designers. Investigation of style. Rehearsal and presentation of one-act play.

5800 Theatre History I: Greek Period to Restoration. Three credits. Development of drama and the theatre; critical study of representative plays of the period.

5850 Theatre History II: Restoration to Present. Three credits. Development of drama and the theatre; critical study of representative plays of the period.

5880 Theatre Organization and Stage Management. Three credits. Prerequisite: Permission of the instructor. Lectures and practical experience in basic methods and principles. Emphasis on ways in which theatre organization and stage management comple-
ment each other while striving to create the desired dramatic effect upon an audience. Major projects required. Crew requirement.

5890 Topics in Dramatic Theory. Three credits. Prerequisite: THEA 4800 or 4810 or permission of instructor. A variable topics seminar concentrating on selected major playwrights linked by theme, or on a particular genre of dramatic theory; an intensive examination of plays which either survey playwrights' careers or represent a significant portion of a genre's canon. May be repeated for credit for up to six hours.

5910 Practicum in Summer Theatre. Three credits. Prerequisite: Employment in summer theatre during the previous summer. A seminar for students who have worked in summer theatre. Includes discussion of assets of training there, auditioning, interviewing, production problems, impact on local community, and impact on college theatre.

5990 Problems in Theatre. One to three credits. Prerequisite: Permission of instructor. Designed to meet individual and/or group needs in all aspects of theatre arts. The topic and credit to be determined at the time of scheduling. A maximum of 6 semester hours credit may be applied toward a degree.



[^0]:    *See page 27 of the Graduate Catalog for University admissions requirements and the section under the relevant program.
    \& Requires completion of Application for Admission to Graduate Program in Criminal Justice

[^1]:    *See page 27 of the Graduate Catalog for University admissions requirements and the section under the relevant program.
    ***GRE scores $=$ two of the following: verbal, analytical, subject

[^2]:    *Included in these rates are charges for out-of-state tuition as follows:

    1. \$4,244.00 for full-time students
    2. \$368.00 per credit hour for part-time students
[^3]:    1-6 credit (quality) hours completed $\qquad$ 2.00 GPA (If 6 graduate hours have been completed, a GPA of 2.00 reflects a quality or grade point deficit of 6 . Next term, unless a course is repeated, 3 or more hours of $B$ grade with no $B$ - or lower grades will generate a GPA greater than or equal to 2.33.)
    Greater than 6-9 credit (quality) hours completed .......... 2.33 GPA (If 9 graduate hours have been completed, a GPA of 2.33 reflects a grade point deficit of 6 . Next term, unless a course is repeated, 3 or more hours of B grade with no B- or lower grades will generate a GPA greater than or equal to 2.50.)
    Greater than $\mathbf{9 - 1 2}$ credit (quality) hours completed ........ 2.50 GPA (If 12 graduate hours have been completed, a GPA of 2.50 still reflects a grade point deficit of 6 . Next term, unless a course is repeated, 3 or more hours of B grade with no B- or lower grades will generate a GPA greater than or equal to 2.60.)
    Greater than 12-15 credit (quality) hours completed ...... 2.60 GPA (If 15 graduate hours have been completed, a GPA of 2.60 still reflects a grade point deficit of 6 . Next term, unless a course is repeated, 3 or more hours of A grade with no B- or lower grades will generate a GPA greater than or equal to 2.83.)

[^4]:    *The student is required to take the thesis option of 3 hours of thesis research or the nonthesis option with 8 hours of electives.

[^5]:    Required
    PSY 6070 Advanced Industrial Organizational Training and Development
    PSY 6090 Practicum: Industrial/Organizational Psychology

