

'07-'09

Graduate Catalog



TENNESSEE
STATE UNIVERSITY

TENNESSEE STATE UNIVERSITY

**THE SCHOOL OF GRADUATE STUDIES
AND RESEARCH
2007-2009 CATALOG**

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University Policy on Equal Opportunity, Affirmative Action, and Compliance with Title IX

Tennessee State University is an affirmative action university. Applicants and candidates will be considered for program participation without discrimination for reasons such as race, color, national origin, sex, religion, age, disability or veterans status. Further, it is the policy of Tennessee State University not to discriminate on the basis of sex in the education programs or activities which it operates, including employment therein and the admission of students thereto; and Tennessee State University is required by Title IX of the Education Amendments of 1972, and regulations issued pursuant thereto (45 C.F.R. Part 86) and by Sections 799A and 845 of the Public Health Service Act, and regulations issued pursuant thereto, not to discriminate in such manner. Inquiries concerning the application of the Acts and the regulations to Tennessee State University may be referred to:

Office of Equity, Diversity, and Compliance
Tennessee State University
Nashville, Tennessee 37209-1561

Tennessee State University is committed to educating a non-racially identifiable student body.

Tennessee State University shall provide equal access to education and employment to all, regardless of disability. The administration of the University adheres to federal and state laws pertaining to equal access/equal opportunity. This pledge covers admission, recruitment, financial assistance, course offerings, extracurricular programs, facilities, counseling, health services, athletics, and employment. To obtain more information about equal access/equal opportunity, please contact either:

Sandra Keith, Section 504 Coordinator, Title VI Coordinator, and Title IX Coordinator
Director of Equity, Diversity, and Compliance
McWherter Administration Building, Suite 260
(615) 963-7435

OR

Patricia Scudder, Section 504 Coordinator
Director of Disabled Student Services
Floyd-Payne Campus Center
(615) 963-7400

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SCOPE OF CATALOG

The provisions of this Catalog do not constitute a contract between a student at TSU and the University. This Catalog presents requirements, regulations, course offerings and degree programs which are in effect at the time of publication. TSU reserves the right to change the regulations in this Catalog at any time during the period for which it is in effect and to add, modify, or withdraw courses at any time.

Degree requirements are subject to change during such period only to the extent required by federal or state laws or accreditation standards. The specific courses or activities constituting the degree requirements for any program are subject to substitution at any time prior to completion by the student.

The remaining provisions of this Catalog reflect the general nature and conditions of the educational services of the University in effect upon publication, but they do not constitute a contract or otherwise binding commitment between the University and the student. Any fees, charges, or costs, and all academic regulations set forth in this Catalog, are subject to cancellation or termination by the University or the Tennessee Board of Regents at any time.

PURPOSE AND USE OF CATALOG

The Tennessee State University Graduate Catalog is the primary general information publication for the University. It is intended to provide information for students and other persons interested in the academic programs and organizations of TSU. In order to understand the activities and programs of the institution, it is important for students to know how to use this Catalog effectively.

The University provides the opportunity for students to increase their knowledge by providing programs of instruction in the various disciplines and programs through a faculty which is trained and qualified for teaching at the college level. However, the acquisition of knowledge by any student is contingent upon the student's desire to learn and his or her application of appropriate study techniques to any course or program. As a result, the University does not warrant or represent that any student who completes a course or program of study will necessarily acquire any specific knowledge or skills, or will be able to pass or successfully complete any specific examination for any course, degree or license.

Graduate students should thoroughly familiarize themselves with the General Information and Admissions, Regulations, Policies section of the Catalog.

Students who have already made decisions concerning the area of study in which they are interested, such as Education, English, Mathematics, Engineering or some other field, should turn to the section of the Catalog dealing with the particular interest for information about admissions, courses and degree requirements. Information about degree programs is to be found under the heading of the college or school in which the program is offered.

Students who have questions concerning their academic progress, curricula or academic standing should consult their faculty advisor, graduate coordinator, department head or academic deans, as appropriate.

Persons interested in graduate work may inquire at the office of the School of Graduate Studies and Research located

in Crouch Hall, or by phone at (615) 963-5901, or e-mail at gradschool@tnstate.edu.

The Dean of the School of Graduate Studies and Research is the editor of the Graduate Catalog and has final authority to determine the contents of the Catalog.

WELCOME TO GRADUATE STUDY

Graduate education at Tennessee State University is designed to offer students the experience of advanced study and research in their fields of specialization. Study at the graduate level requires a high level of motivation in students who are committed to excellence in knowledge, in research, and in contributions to the profession, or service to the community.

The University has two conveniently located campuses. The Main Campus, which overlooks the Cumberland River, is bounded by 28th Avenue and 39th Avenue North, and is adjacent to both east and westbound exits of I-40. Its sprawling 450 acres include 60 buildings, 8 residence halls, a 400,000 volume library, a 12,000 seat arena, an award-winning student center and land for agricultural research.

A major and nearly-completed renovation featuring new and restored buildings and facilities, grounds beautification, and parking has transformed the historic main campus into a modern pedestrian campus with peripheral parking.

The Avon Williams Campus is located in downtown Nashville in the heart of the city's commerce district. It is adjacent to the center of state government: the Capitol, Legislative Plaza, and the Tennessee Supreme Court.

The student population at Tennessee State University is approximately 9,000. The graduate student population numbers more than 1,900. Cultural diversity accurately describes these students, who come from various areas across the country and from many countries around the world for the Tennessee State University experience.

The graduate faculty consists of outstanding scholars, researchers, artists, scientists, performers and practitioners who are respected by their professional peers. Many are highly qualified as presenters and consultants with regional, national, and international reputations. Graduate faculty hold doctoral degrees from respected colleges and universities. Since the faculty and students are culturally diverse, Tennessee State University affords a rare opportunity to participate in and share the uniqueness of cultural diversity.

We are delighted that you are considering studying at Tennessee State University: the major public, comprehensive urban university of Nashville and Middle Tennessee.

TENNESSEE STATE UNIVERSITY

Vision Statement

Tennessee State University aspires to achieve national and international prominence, building on its heritage and preparing leaders for a global society.

Mission Statement

Tennessee State University, a Historically Black College/University (HBCU), fosters scholarly inquiry and research, lifelong learning, and a commitment to service.

Core Values

Tennessee State University maintains the following core values:

- Excellence
- Learning
- Accountability
- Integrity
- Shared governance
- Diversity
- Service

Statement of Purpose

Tennessee State University, an HBCU and 1890 land grant institution, is a major state-supported urban and comprehensive university. This unique combination of characteristics differentiates the University from others and shapes its instructional, research, and service programs designed to serve Metropolitan Nashville, Middle Tennessee, the State of Tennessee, the nation, and the global community. The University is committed to maintaining its diverse student body, faculty and staff.

Tennessee State University provides quality instruction through academic programs which are broadly comprehensive at the baccalaureate and master's levels. Doctoral programs are offered in select areas where the University exhibits strength in instruction and research and consistent with the University's unique mission. The University's educational programs are intended to increase the student's level of knowledge, enhance the student's skills, and expand the student's awareness.

Tennessee State University is committed to engaging in pure and applied research which contributes to the body of knowledge and which broadens the application of knowledge. Whenever possible, the University strives to provide its students with the opportunity to be involved in the research activities of the faculty and academic staff.

Tennessee State University serves its constituents through an array of programs and services which apply the knowledge, skills and discoveries of the instructional and research units at the institution. These services are intended to broaden the perspectives and enhance the quality of life of the University's service constituents.

Tennessee State University expresses its commitment to students' overall development by promoting life-long learning, scholarly inquiry, and a commitment of service to others. Programs and services are geared toward promoting and nurturing students' growth and development as persons who are liberally educated, appreciate cultural diversity, and embody a sense of civic and social responsibility.

Tennessee State University projects itself to its students, faculty, and alumni and to the citizens of the State through the motto, "Think, Work, Serve."

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.

GOALS OF THE SCHOOL OF GRADUATE STUDIES AND RESEARCH

- (1) To maintain high standards of instruction in graduate education, continuing education, and in the curricula and fields of specialization through which degree programs are offered;
- (2) To foster the continuation of faculty and student involvement in research which advances knowledge in the areas concerned;
- (3) To continue expanding its role as a public servant and leader of the citizens of the State by disseminating knowledge and providing a broad variety of educational and technical services;
- (4) To provide advanced degree programs and services especially tailored to the need and convenience of graduate students of all ages, including working adults of the corporate and industrial communities in the mid-state area; and,
- (5) To provide an atmosphere that will enhance the emotional, educational, cultural, social, and recreational growth of the total University community.

ADMINISTRATION OF GRADUATE PROGRAMS

The Dean of the School of Graduate Studies and Research is the administrative officer for all graduate programs and is responsible to the Provost and Executive Vice President.

The Graduate Council is the advisory body for the Graduate School. Its members are Graduate Faculty elected by the Graduate Faculty in departments or units offering graduate degrees, the Director of the Library, and the Graduate Dean, who is the chairperson. The Appeals Committee of the Graduate Council reviews petitions and appeals submitted by students and faculty concerning admissions, retention and suspension of students.

The graduate coordinator for each department is the general advisor for students in the department. The graduate coordinator is responsible for evaluating the credentials under which the student is admitted to that program, designating, when necessary, the courses the student should take to remove deficiencies, rejecting applicants on the basis of unacceptable credentials, and notifying the Graduate School of departmental decisions.

When Schools/Colleges/Institutes instead of Departments offer degrees, e.g., the Master of Engineering degree in Engineering, Technology and Computer Science, Master of Business Administration degree in the School of Business, and the Master of Public Administration in the Institute of Government, the Dean or Director appoints a coordinator to serve as general advisor for all students. While the Major Advisor supervises the student's program, it is the primary responsibility of the student to know and observe all pertinent regulations in order to meet all of the requirements for the degree sought.

GRADUATE FACULTY

Policies pertaining to Graduate Faculty membership are contained in the Graduate Faculty Handbook. Members of the Graduate Faculty are listed at the end of each department or unit section of this catalog. The list was current at the time of preparation of this Catalog, but is subject to change.

ACCREDITING AGENCIES

- **Institutional:** Tennessee State University is accredited by the Commission on Colleges of the Southern Association of

Colleges and Schools to award the associate, bachelor's, master's, specialist in education, and doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Tennessee State University.

- **Program:** The Master of Public Administration degree program is accredited by the National Association of Schools of Public Affairs and Administration.
- **Program:** The Master of Business Administration program is accredited by AACSB International—The Association to Advance Collegiate Schools of Business.
- **Program:** Master's and Doctoral programs in education are accredited by the National Association for the Accreditation of Teacher Education.
- **Program:** The Master of Science in Nursing degree program is accredited by the National League for Nursing Accreditation.
- **Program:** The Master's program in Speech and Hearing Sciences is accredited by the Council on Academic Accreditation (CAA) of the American Speech Language and Hearing Association (ASHA).
- **Program:** The Master of Education in Family and Consumer Sciences is accredited by the American Association of Family and Consumer Sciences.
- **Program:** The Doctor of Philosophy in Psychology with a concentration in Counseling is accredited by the American Psychological Association.
- **Program:** The Doctor of Physical Therapy program is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).
- **Program:** The Master of Occupational Therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE).

INSTITUTIONAL MEMBERSHIPS

Tennessee State University is a member in good standing of the following associations:

- American Council on Education
- American Humanics
- American Psychological Association (APA)
- AACSB International—The Association to Advance Collegiate Schools of Business
- American Association of Family and Consumer Sciences—Higher Education Unit

- American Association of Colleges for Teacher Education
- American Association of Colleges of Nursing
- American Association of Collegiate Registrars and Admissions Officers
- American Association of State Colleges and Universities
- Association of Administrators of Human Sciences
- Association of Allied Health Professions
- Association of Colleges and Schools of Education in State Universities and Land Grant Colleges (ACSESULAC)
- Association of Schools of Allied Health Professions
- The College Board
- Conference of Southern Graduate Schools
- Council of Colleges of Arts and Sciences
- Council for Counseling Psychology Training Programs (CCPTP)
- Council of Graduate Schools
- Council of Historically Black Graduate Schools
- Council of 1890 Family and Consumer Sciences
- Council of 1890 Presidents
- Council of the Great City Colleges of Education
- Nashville Area Chamber of Commerce
- National Association for Business Teacher Education
- National Association of Collegiate Directors of Athletics
- National Association for Equal Opportunity in Higher Education (NAFEO)
- National Association for Multicultural Education (NAME)
- National Association of Schools of Art and Design
- National Association of Schools of Music
- National Association of State Directors of Teacher Education and Certification (NASDTEC)
- National Association of State Universities and Land-Grant Colleges
- National Collegiate Athletic Association
- National Council for Accreditation of Teacher Education
- National Society of Allied Health
- National University Extension Association
- Ohio Valley Conference
- Southern Business Administration Association
- Southern Regional Education Board
- Teacher Education Council of State Colleges and Universities
- Tennessee Association of Colleges for Teacher Education
- Tennessee College Association
- Tennessee Conference of Graduate Schools
- University Council for Educational Administration (UCEA)
- World Council for Curriculum and Instruction (WCCI)



THE SCHOOL OF GRADUATE STUDIES AND RESEARCH THE 2007-2009 CALENDAR

FALL SEMESTER 2007

July 1	Priority deadline for applications for Admission to the Graduate School for Fall 2007
August 16-17	Faculty Institute
August 19	Graduate Student Orientation
August 22-24	Registration ("MyTSU"—see Class Schedule for details)
August 27	Classes begin
August 27-31	Late Registration/Schedule Adjustment*
September 3	Holiday—Labor Day
September 8 & 15	DOCTORAL EXAMINATIONS
September 11	Graduate Council Meeting
September 28	Last day to file Application for M.Ed., M.P.A., and M.S. Comprehensive Examinations for students graduating in Spring 2008
October 9	Graduate Council Meeting
October 13-16	Fall Break (includes weekend preceding)
October 19	Last Day to sign in Theses & Dissertations in Graduate School Office, for December 2007 Graduation
October 22-28	Mid-Term Examination Week
November 1	Priority deadline for applications for admission to the Graduate School for Spring 2008
November 1	Complete Applications Due for Master's Program in Criminal Justice for Spring 2008
November 2	Last Day to file for Doctoral Examinations for January 2008
November 2	Last Day to Defend Theses/Doctoral Dissertations
November 2	M.P.A. COMPREHENSIVE EXAMINATION
November 3	M.Ed. and M.S. COMPREHENSIVE EXAMINATIONS
November 7	Last Day to withdraw from courses—Office of Records Last Day to withdraw from University—University Counseling Center
November 13	Graduate Council Meeting
November 16	Last Day to deposit Theses/Dissertations with Graduate School
November 22-25	Holiday- Thanksgiving (includes weekend)
December 1	Complete Applications due for Doctoral Programs in Psychology for Fall 2008 Admission
December 6	Last Day of Classes
December 7-14	Final Examinations for Fall 2007 semester**
December 15	Fall Commencement
December 18	Faculty must have posted all grades via "MyTSU"

*No registration or schedule adjustments for Fall semester will be allowed after August 31, 2007.

**Final examination schedules will be posted via MyTSU and on TSU web page.

This calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution.

SPRING SEMESTER 2008

January 2	University Re-Opens—8:00 a.m.
January 3-4	Faculty Institute
January 8-11	Registration (“MyTSU”—see Class Schedule for details)
January 14	Classes Begin
January 14-18	Late Registration/Schedule Adjustment*
January 19 & 26	DOCTORAL EXAMINATIONS
January 21	Holiday—Martin Luther King Day
January 22	Graduate Council Meeting
February 1	Complete Applications due for Master’s Program in Speech and Hearing Science for Fall 2008.
February 12	Graduate Council Meeting
February 15	Complete Applications due for Doctoral Program in Physical Therapy for Summer 2008; Master’s Program in Occupational Therapy for Fall 2008
February 27	Deadline to file Application for M.P.A., M.Ed., & M.S. Comprehensive Examination for Summer or Fall 2008
March 3-9	Spring Break
March 10-16	Mid-Term Examination Week
March 10	Last Day to sign in Theses/Dissertations in Graduate School Office for May 2008 Graduation
March 11	Graduate Council Meeting
March 14	M.P.A. COMPREHENSIVE EXAMINATION
March 15	M.Ed. and M.S. COMPREHENSIVE EXAMINATIONS
March 15	Complete Applications due for Master’s Program in Nursing; Counseling Psychology; Doctoral Program in Biological Sciences
March 21	Holiday—Good Friday
March 24	Last day to defend Theses/Dissertation
March 24	Last Day to file for Doctoral Examinations in June 2008
March 28	Last day to withdraw from courses—Office of Records Last day to withdraw from University—University Counseling Center
April 1	Priority deadline for applications for admission to the Graduate School for Summer 2008
April 7	Last day to deposit Theses/Dissertations with Graduate School
April 8	Graduate Council Meeting
April 15	Complete Applications due for Master’s Program in Criminal Justice for Summer 2008
April 24	Last day of classes
April 25-May 2	Final Examinations for Spring 2008 Semester**
May 3	Spring Commencement
May 6	Faculty must have posted all grades via “MyTSU”

* No registration or schedule adjustments will be allowed after January 18, 2008.

**Final examination schedules will be posted via MyTSU and on TSU web page.

This calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution.

SUMMER SEMESTER 2008

(Summer School Dates are Subject to Change)

June 2 - July 3	1st Five Week Session
June 2 - August 8	10 Week Session
July 7 - August 8	2nd Five Week Session
August 9	Commencement

SUMMER SCHEDULE & DEADLINES

June 7 & 14	DOCTORAL EXAMINATIONS
June 17	Last day to sign in Theses/Dissertations in Graduate School Office for August Graduation
June 20	M.P.A. Comprehensive Examination
June 21	M.Ed. and M.S. Comprehensive Examinations
July 7	Last day to defend Theses/Dissertations
July 18	Last day to deposit Theses/Dissertations in the Graduate School
July 21	Last day to file for doctoral examinations in September

1st Five Week Session

May 29-30	Registration, All Summer Sessions ("MyTSU"—see Class Schedule for details)
June 2	Classes Begin
June 2	Late Registration/Schedule Adjustment
June 15	Complete Applications due for Master's Program in Criminal Justice for Fall 2008
June 20	Last day to withdraw from First-session courses—Office of Records
	Last day to withdraw from University—University Counseling Center
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2008
July 3	Last Day of Classes
July 4	Holiday—Independence Day
July 8	Faculty must have posted all grades via "MyTSU"
August 9	Summer commencement

2nd Five Week Session

May 29-30	Registration, All Summer Sessions ("MyTSU"—see Class Schedule for details)
July 7	Classes Begin
July 7	Late Registration/Schedule Adjustment
July 15	Complete Applications due for Master's Program in Nursing for Fall 2008
July 25	Last day to withdraw from Second-session courses—Office of Records
	Last day to withdraw from the University—University Counseling Center
August 8	Last day of classes
August 9	Summer Commencement
August 12	Faculty must have posted all grades via "MyTSU"

10 Week Session

May 29-30	Registration, All Summer Sessions ("MyTSU"—see Class Schedule for details)
June 2	Classes Begin
June 2	Late Registration/Schedule Adjustment
June 15	Complete Applications due for Master's Program in Criminal Justice for Fall 2008
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2008
July 4	Holiday—Independence Day
July 7	Last day to withdraw from courses—Office of Records
	Last day to withdraw from the university—University Counseling Center
July 15	Complete Applications due for Master's Program in Nursing for Fall 2008
August 8	Last Day of Classes
August 9	Summer Commencement
August 12	Faculty must have posted all grades via "MyTSU"

Final examinations for summer semesters will be scheduled during the last official meeting date/time for all courses.

This calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution.

THE SCHOOL OF GRADUATE STUDIES AND RESEARCH THE 2007-2009 CALENDAR

FALL SEMESTER 2008

July 1	Priority deadline for applications for Admission to the Graduate School for Fall 2008
August 17	Graduate Student Orientation
August 20-22	Registration ("MyTSU"—see Class Schedule for details)
August 23	Classes begin
August 25-29	Late Registration/Schedule Adjustment*
September 1	Holiday—Labor Day
September 9	Graduate Council Meeting
September 13 & 20	DOCTORAL EXAMINATIONS
September 26	Last day to file Application for M.Ed., M.P.A., and M.S. Comprehensive Examinations for students graduating in Spring 2009
October 11-14	Fall Break (includes weekend preceding)
October 17	Last Day to sign in Theses & Dissertations in Graduate School Office, for December 2008 Graduation
October 20-26	Mid-Term Examination Week
October 21	Graduate Council Meeting
November 1	Priority deadline for applications for admission to the Graduate School for Spring 2009
November 1	Complete Applications Due for Master's Program in Criminal Justice for Spring 2009
November 7	Last Day to withdraw from courses—Office of Records
	Last Day to withdraw from University—University Counseling Center
November 7	Last Day to file for Doctoral Examinations for January 2009
November 7	Last Day to Defend Theses/Doctoral Dissertations
November 7	M.P.A. COMPREHENSIVE EXAMINATION
November 8	M.Ed. and M.S. COMPREHENSIVE EXAMINATIONS
November 11	Graduate Council Meeting
November 21	Last Day to deposit Theses/Dissertations with Graduate School
November 27-30	Holiday- Thanksgiving (includes weekend)
December 1	Complete Applications due for Doctoral Programs in Psychology for Fall 2009 Admission
December 4	Last Day of Classes
December 5-12	Final Examinations for Fall 2008 semester**
December 13	Fall Commencement
December 16	Faculty must have posted all grades via "MyTSU"

*No registration or schedule adjustments for Fall semester 2008 will be allowed after August 29, 2008.

**Final examination schedules will be posted via MyTSU and on TSU web page.

This calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution.

SPRING SEMESTER 2009

January 2	University Re-Opens—8:00 a.m.
January 8-9	Faculty Institute
January 12	Advisement for new students
January 12-14	Registration (“MyTSU”—see Class Schedule for details)
January 15	Classes Begin
January 17 & 24	DOCTORAL EXAMINATIONS
January 19	Holiday—Martin Luther King Day
January 20-23	Late Registration/Schedule Adjustment*
January 27	Graduate Council Meeting
February 1	Complete Applications due for Master’s Program in Speech and Hearing Science for Fall 2009
February 10	Graduate Council Meeting
February 15	Complete Applications due for Doctoral Program in Physical Therapy for Summer 2009; Master’s Program in Occupational Therapy for Fall 2009
February 25	Deadline to file Application for M.P.A., M.Ed., & M.S. Comprehensive Examination for Summer or Fall 2009
March 2-8	Mid-Term Examination Week
March 9-15	Spring Break
March 15	Complete Applications due for Master’s Program in Nursing; Counseling Psychology; Doctoral Program in Biological Sciences
March 16	Last Day to sign in Theses/Dissertations in Graduate School Office for May 2009 Graduation
March 17	Graduate Council Meeting
March 20	M.P.A. COMPREHENSIVE EXAMINATION
March 21	M.Ed. and M.S. COMPREHENSIVE EXAMINATIONS
March 30	Last day to defend Theses/Dissertation
March 30	Last Day to file for Doctoral Examinations in June 2008
March 31	Last day to withdraw from courses—Office of Records Last day to withdraw from University—University Counseling Center
April 1	Priority deadline for applications for admission to the Graduate School for Summer 2009
April 10	Holiday—Good Friday
April 13	Last day to deposit Theses/Dissertations with Graduate School
April 14	Graduate Council Meeting
April 15	Complete Applications due for Master’s Program in Criminal Justice for Summer 2009
April 30	Last day of classes
May 1-8	Final Examinations for Spring 2009 Semester**
May 9	Spring Commencement
May 12	Faculty must have posted all grades via “MyTSU”

*No registration or schedule adjustments for Spring 2009 will be allowed after January 23, 2009.

**Final examination schedules will be posted via MyTSU and on TSU web page.

This calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution.

SUMMER SEMESTER 2009

June 1 - July 3	1st Five Week Session
June 1 - August 7	10 Week Session
July 7 - August 7	2nd Five Week Session
August 8	Commencement

SUMMER SCHEDULE & DEADLINES

June 6 & 13	DOCTORAL EXAMINATIONS
June 23	Last day to sign in Theses/Dissertations in Graduate School Office for August Graduation
June 19	M.P.A. Comprehensive Examination
June 20	M.Ed. and M.S. Comprehensive Examinations
July 10	Last day to defend Theses/Dissertations
July 20	Last day to file for doctoral examinations in September
July 24	Last day to deposit Theses/Dissertations in the Graduate School

1st Five Week Session

May 28-29	Registration, All Summer Sessions (“MyTSU”—see Class Schedule for details)
June 1	Classes Begin
June 1	Late Registration/Schedule Adjustment
June 15	Complete Applications due for Master’s Program in Criminal Justice for Fall 2009
June 19	Last day to withdraw from First-session courses—Office of Records
	Last day to withdraw from University—University Counseling Center
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2009
July 3	Last Day of Classes
July 6	Holiday
July 7	Faculty must have posted all grades via “MyTSU”
August 8	Summer commencement

2nd Five Week Session

May 28-29	Registration, All Summer Sessions (“MyTSU”—see Class Schedule for details)
July 7	Classes Begin
July 7	Late Registration/Schedule Adjustment
July 15	Complete Applications due for Master’s Program in Nursing for Fall 2009
July 24	Last day to withdraw from Second-session courses—Office of Records
	Last day to withdraw from the University—University Counseling Center
August 7	Last day of classes
August 8	Summer Commencement
August 11	Faculty must have posted all grades via “MyTSU”

10 Week Session

May 28-29	Registration, All Summer Sessions (“MyTSU”—see Class Schedule for details)
June 1	Classes Begin
June 1	Late Registration/Schedule Adjustment
June 15	Complete Applications due for Master’s Program in Criminal Justice for Fall 2009
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2009
July 6	Holiday
July 10	Last day to withdraw from courses—Office of Records
	Last day to withdraw from the university—University Counseling Center
July 15	Complete Applications due for Master’s Program in Nursing for Fall 2009
August 7	Last Day of Classes
August 8	Summer Commencement
August 11	Faculty must have posted all grades via “MyTSU”

Final examinations for summer semesters will be scheduled during the last official meeting date/time for all courses.

This calendar is subject to change at any time prior to or during an academic term due to emergencies or causes beyond the reasonable control of the institution.

GENERAL INFORMATION

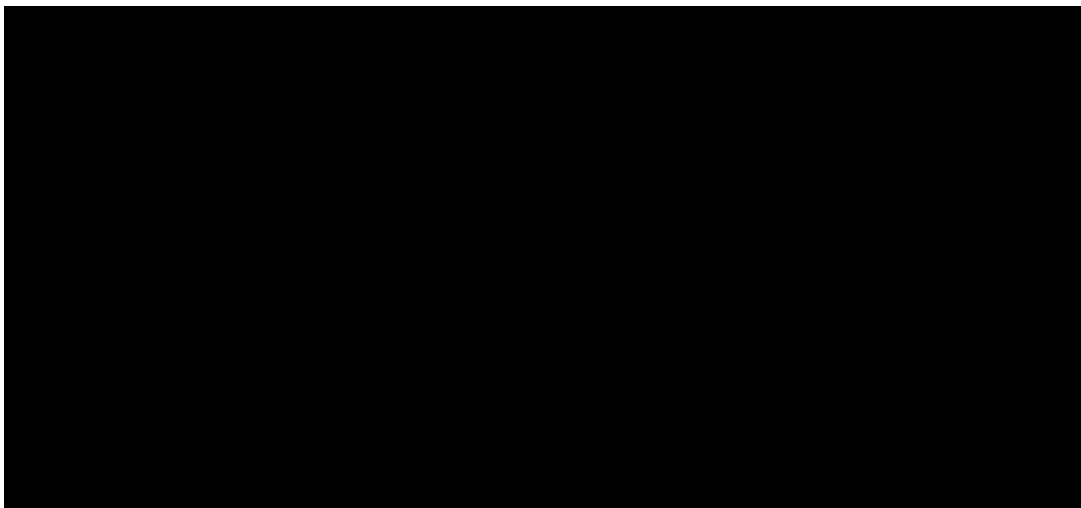


HISTORY

In 1909 Tennessee State University was developed as a normal school for Negroes.

- 1941 The General Assembly authorized the State Board of Education to establish graduate studies leading to the master's degree in several branches of teacher education.
- 1944 In June, the first master's degree was awarded.
- 1946 The Southern Association of Colleges and Schools accredited the institution.
- 1951 The State Board of Education granted the college university status. The reorganization included the establishment of the Graduate School, the School of Arts and Sciences, the School of Education, and the School of Engineering, and provided for the additions of the other schools: Agriculture, Business, and Home Economics, respectively.
- 1958 The University was elevated to a full-fledged land-grant university. The program included the School of Agriculture and Home Economics, the Graduate School, the Division of Business, the Division of Extension and Continuing Education, and the Department of Aerospace Studies.
- 1969 The current name, Tennessee State University, was adopted.
- 1974 The School of Allied Health and the School of Business were established, while the Specialist in Education degree was authorized.
- 1976 The Master of Criminal Justice degree was approved.
- 1977 The Master of Public Administration degree was approved.
- 1978 The Master of Engineering degree, the Master of Arts in Education, and the Master of Education Degrees in Reading were approved.
- 1979 Tennessee State University and University of Tennessee-Nashville merged. The Master of Business Administration degree was established.
- 1980 The Doctor of Education degree was approved in three majors: Curriculum and Instruction, Educational Administration, and Educational Psychology and Guidance.
- 1986 The Doctor of Education degree in Educational Psychology and Guidance was changed to a Doctor of Education degree in Psychology with concentrations in Counseling Psychology and School Psychology; an M.S. degree in Mathematical Sciences was approved; a Ph.D. degree in Public Administration was approved.
- 1987 The Graduate School was redefined as the School of Graduate Studies and Research.
- 1991 The School of Graduate Studies and Research celebrates 50 years of Graduate education.
- 1994 The Master of Science in Nursing Degree was initiated.
- 1996 The Psychology doctoral program degree designation changed from Ed.D. to Ph.D.;
- 1997 The Master of Science in Computer and Information System Engineering (CISE) was initiated.
- 1998 The Doctor of Philosophy degree in Biological Sciences was initiated.
- 1999 The Doctor of Philosophy degree in Computer and Information Systems Engineering was approved.
- 2006 The Doctor of Physical Therapy program was initiated.

Today, Tennessee State University offers fourteen degrees in twenty-six areas of study at the graduate level.



GRADUATE DEGREES AWARDED BY COLLEGES, SCHOOLS, AND INSTITUTES

COLLEGE, SCHOOL, INSTITUTE	MAJOR/PROGRAM	CONCENTRATIONS	DEGREE/CERTIFICATE
Department			
AGRICULTURE & CONSUMER SCIENCES Agricultural Sciences	Agricultural Sciences	Animal Science Plant Science Agribusiness Agricultural Education	M.S.
	Applied Geospatial Info. Sys.		Certificate
ARTS & SCIENCES Biological Sciences	Biology Biological Sciences		M.S. Ph.D.
Chemistry	Chemistry		M.S.
Criminal Justice	Criminal Justice Administration		M.C.J.
Languages, Literature & Philosophy	English		M.A.
Music	Music Ed.		M.S.
Physics & Mathematics	Mathematical Sciences		M.S.
BUSINESS Business	Business Administration	Accounting Healthcare Economics & Management Management of Information Systems Supply Chain Management General MBA	M.B.A.
EDUCATION Educational Administration	Administration and Supervision	K-12 Administration Higher Education Administration	Ed.D.
Human Performance and Sport Sciences	Administration and Supervision Health, Physical Ed., Recreation Guid. & Coun. Psychology	Exercise Science Sport Administration PreK-12 School Counseling Counseling Psychology School Psychology	M.Ed., Ed.S. M.A.Ed.
Psychology	School Psychology Psychology	Counseling Psychology School Psychology Curriculum Planning Elementary Education Secondary Education Reading Special Education	M.S. Ph.D.
Teaching & Learning	Curriculum & Instruction	Counseling Psychology School Psychology Curriculum Planning Elementary Education Secondary Education Reading Special Education Secondary School Instruction Adult Education Educational Technology History Tch. Non-English Lang. Child Reading Childhood Literacy Reading	Ed.S. M.S.
	Curriculum & Instruction		Ed.D.
	Advanced Studies in Teaching & Learning Elem. Ed. Special Ed.		M.Ed.
			M.Ed./RODP M.Ed. M.Ed.
ENGINEERING, TECHNOLOGY AND COMPUTER SCIENCE Electrical & Computer Engineering	Computer and Information Systems Engineering	Computer Comm. & Networks Control Systems and Signal Processing Robotics and Comp. Integr. Manufacturing	Ph.D.
Engineering	Computer and Information Systems Engineering	Biomedical Eng. Civil Eng. Environmental Eng. Electrical Eng. Mechanical Eng. Manufacturing Eng.	M.S. M.E.
HEALTH SCIENCES Occupational Therapy Physical Therapy Speech Pathology & Audiology	Occupational Therapy Physical Therapy Speech and Hearing Science		M.O.T. D.P.T. M.S.
INSTITUTE OF GOVERNMENT Institute of Government	Public Administration Professional Studies Health Administration and Planning Non-Profit Management	Strategic Leadership	M.P.A., Ph.D. M.P.S./RODP Certificate Certificate
NURSING Nursing	Nursing	Family Nurse Practitioner Holistic Nursing Nursing Education	M.S.N.
	Nursing	Family Nurse Practitioner Nursing Administration Nursing Education Nursing Informatics	M.S.N./RODP
	Family Nurse Practitioner Holistic Nursing Nursing Education		Certificate Certificate Certificate

TENNESSEE STATE UNIVERSITY

2007-2008 FEES

UNDERGRADUATE TENNESSEE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9hrs.	10hrs.	11hrs.	12+hrs.
MAINTENANCE	\$178	\$356	\$534	\$712	\$890	\$1,068	\$1,246	\$1,424	\$1,602	\$1,780	\$1,958	\$2,029
DEBT SERVICE	8	16	24	32	40	48	56	64	72	80	88	89
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	70	70	70	70	70	70	70	70	70	70	70	70
POST OFFICE BOX							15	15	15	15	15	15
GENERAL ACCESS	107	119	131	143	155	167	179	191	203	215	227	237
TOTAL	\$366	\$564	\$762	\$960	\$1,158	\$1,356	\$1,569	\$1,767	\$1,965	\$2,163	\$2,361	\$2,443

UNDERGRADUATE OUT-OF-STATE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9hrs.	10hrs.	11hrs.	12+hrs.
MAINTENANCE	\$178	\$356	\$534	\$712	\$890	\$1,068	\$1,246	\$1,424	\$1,602	\$1,780	\$1,958	\$2,029
TUITION	446	892	1,338	1,784	2,230	2,676	3,122	3,568	4,014	4,460	4,906	5,138
DEBT SERVICE	8	16	24	32	40	48	56	64	72	80	88	89
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	70	70	70	70	70	70	70	70	70	70	70	70
POST OFFICE BOX							15	15	15	15	15	15
GENERAL ACCESS	107	119	131	143	155	167	179	191	203	215	227	237
TOTAL	\$812	\$1,456	\$2,100	\$2,744	\$3,388	\$4,032	\$4,691	\$5,335	\$5,979	\$6,623	\$7,267	\$7,581

GRADUATE TENNESSEE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9+hrs.
MAINTENANCE	\$288	\$576	\$864	\$1,152	\$1,440	\$1,728	\$2,016	\$2,304	\$2,723
DEBT SERVICE	8	16	24	32	40	48	56	64	89
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	70	70	70	70	70	70	70	70	70
POST OFFICE BOX							15	15	15
GENERAL ACCESS	121	135	149	163	177	191	205	219	237
TOTAL	\$490	\$800	\$1,110	\$1,420	\$1,730	\$2,040	\$2,365	\$2,675	\$3,137

GRADUATE OUT-OF-STATE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9+hrs.
MAINTENANCE	\$288	\$576	\$864	\$1,152	\$1,440	\$1,728	\$2,016	\$2,304	\$2,723
TUITION	446	892	1,338	1,784	2,230	2,676	3,122	3,568	5,138
DEBT SERVICE	8	16	24	32	40	48	56	64	89
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	70	70	70	70	70	70	70	70	70
POST OFFICE BOX							15	15	15
GENERAL ACCESS	121	135	149	163	177	191	205	219	237
TOTAL	\$936	\$1,692	\$2,448	\$3,204	\$3,960	\$4,716	\$5,487	\$6,243	\$8,275

RESIDENCE FACILITIES:

	Single	Double	Triple	Per Student
On-Campus Apartments (A)	n/a	n/a	n/a	\$2,600
On-Campus Residence Halls	\$2,840	\$1,491	\$998	n/a
Hale /Rudolph		\$1,531	\$1,026	

MEAL PLANS*:

19 Meals + \$100	\$1,110
10 Meals + \$100	\$980
5 Meals + \$ 50	\$460

OTHER FEES:

Orientation	\$40
Int'l Students	\$30/Semester; \$0 Summer
Regents On-line Degree Fee (B)	
Undergraduate	\$71/hour
Graduate	\$71/hour
Business Course Fee	\$20/hour (C)
Developmental Courses-Maintenance Fee	\$101/hour (D)
Science Lab Materials Fee	\$5/hour (E)

(A) Residents of on-campus apartments are not required to participate in ANY meal plan. All other residents are required to participate in the 19-MEAL PLAN if they have less than thirty (30) student credit hours earned, or a MINIMUM of the 10-MEAL PLAN if they have thirty (30) or more student credit hours earned.

(B) RODP Students are required to pay the Maintenance Fee (\$178/hour for Undergraduate, \$288/hour for Graduate and \$101/hour for developmental courses) and Tuition (\$446/hour for out-of-state students) in addition to this fee. RODP students must pay for every credit hour, even if the hours exceed the credit hours of full-time status. RODP students are not required to pay the student government, post office box, debt service, general access, or student activity fees. If RODP students desire to attend campus activities, they may request to pay the additional student activity fee.

(C) This fee is required for all business courses except Business Orientation, Principles of Economics, and Introduction to Statistical Analysis I.

(D) Students in Remedial or Developmental courses will be charged the reduced rate.

(E) This fee is required for all Biology, Chemistry and Physics Labs.

SPECIAL FEES

(Fees subject to change without notice)

Application Fee (non-refundable, should be included with the application).....	25.00
Bad Check Charge.....	30.00
Comprehensive Exam.....	15.00
Credit/Audit Change.....	10.00
Duplicate I.D. Card.....	10.00
International Student Fee (This is not assessed for the Summer Term).....	30.00
Late Registration.....	100.00
Library Fines (non-refundable) per day	
Two-week Books \$0.10/day (Grace period of 5 days, 6th day \$0.60)	
Reserve Books (\$0.10 for each additional hour)	
Lost Books -	
List price of book plus a processing fee of.....	5.00
Out-of-print books.....	50.00
Property Damage (Actual Value)	
Room Deposit (per semester).....	100.00
Theses and Dissertations	
Dissertation Continuation.....	25.00
Thesis Continuation, on Second Registration.....	25.00
Dissertation/Thesis Archiving (Publishing)	
Master's.....	45.00
Doctoral.....	55.00
Thesis/Dissertation Copyright (optional).....	65.00

FEE PAYMENT

Bills Will Not Be Mailed. Access myTSU (<http://myTSU.tnstate.edu>) to view account balances.

All fees must be paid at the time of registration unless covered by authorized deferment. Personal check or MasterCard and Visa credit card payments are accepted on myTSU (<http://myTSU.tnstate.edu>). It is the policy of Tennessee State University to electronically convert and process all paper checks received via Point of Purchase, mail or drop box using the Automated Clearing House (ACH) Network, under the rules governed by the National Automated Reserve Bank. Personal checks, cashier/bank checks, money orders, MasterCard or Visa credit card payments, or completed Fee Waiver or Employee Discount or Dependent program forms may be mailed to:

TSU
3500 John A. Merritt Blvd.
P.O. Box 9621
Nashville, TN 37209

Payments should be mailed seven days prior to scheduled deadlines. Bank Wires may be made to AmSouth Bank, account 062000019-1001152956. (The student's SSN or IDN must be referenced on the wire). Entering courses without paying fees does not constitute enrollment.

FINANCIAL REGULATIONS

Students will not be permitted to register for the new semester or remain in residences halls any semester in which their financial obligations are not satisfactorily met.

No student will be given a diploma or any grade reports until all financial obligations are paid in full.

Transcripts are sent out only after all financial obligations to the University have been satisfied. Students registering for graduate

credit must pay appropriate fees. All laboratory fees must be paid in full. Refer to a printed or online Class Schedule for a given semester for current Financial Regulations.

PERSONS OVER 60 YEARS OF AGE AND TOTALLY DISABLED PERSONS

Pursuant to TCA 49-7-113, disabled persons suffering from a permanent disability which totally incapacitates such persons from working at an occupation which brings him/her an income, **and** persons who will become sixty (60) years of age or older during the academic semester in which such persons begin classes (and who are domiciled in Tennessee) may audit courses at the University without paying tuition charges, maintenance fees, student activity fees, or registration fees; however, this privilege may be limited or denied by the University on an individual classroom basis according to space availability. Prior to admittance, the University may require an affidavit or certificate from a physician or an agency charged with compensating the disabled person or adjudicating the permanent total disability of the person who is requesting admittance to classes, to confirm that such person is permanently and totally disabled.

Disabled persons, as defined above, and persons who become sixty-five (65) years of age or older during the academic semester in which such persons begin classes (and who are domiciled in Tennessee) may be enrolled in courses for credit at the University. For credit, a fee equal to 50% of the per hour rate with a maximum of \$70.00 per semester may be charged. Admissions will be limited on an individual classroom basis according to space available. Eligible persons are advised to check with the Office of Admissions and Records prior to attempting to register for courses, as special provisions must be made for them during registration.

REFUND POLICY

I. The refund policy for the fees, outlined in the Fee section of the Class Schedule is outlined below:

- A. 100% of the fees will be refunded for classes cancelled by the University.
 - B. 100% of the fees will be refunded in case of a student's death.
 - C. No refund of rent, tuition or other fees will be made to students who are dismissed or suspended.
 - D. The parking permit fee is non-refundable.
- II. The refund policy for all other fees is outlined below:
- A. 100% of the fees will be refunded for drops or withdrawal prior to the beginning of the first day of classes.
 - B. 75% of fees will be refunded for drops or withdrawals from the first day of classes through the (14th) fourteenth calendar (including weekends) day of classes.
 - C. 25% of fees will be refunded following exhaustion of the 75% period, for a period of time extending 25% of the time period covered by the term. If the refund date falls on the weekend, drops or withdrawals must be processed by the previous Friday.

APPEALS PROCEDURES FOR FEES AND REFUNDS

A student may appeal the assessment, application, calculation or interpretation of any University fee, charge, deposit, or refund, or any University action connected with fees or charges. Questions should be discussed with personnel in the Bursar's Office. A written appeal can be made to the office of the Vice President for Business Affairs; his/her determination may be appealed to the President of the University whose decision is final.

RESIDENCY CLASSIFICATION

The Admissions Office is charged with the determination of a student's residency status for fee-paying purposes and as the basis for some University admission requirements. Classification is determined by information submitted on the admission application and/or application for re-classification (Change in Residency Application). Notification in writing is made soon after the student applies for re-classification.

The deadline dates are:

Summer Session	April 1
Fall Semester	July 1
Spring Semester	November 1

All decisions are based on regulations established by the Tennessee State Board of Regents, with the intent that all Tennessee public institutions of higher education apply uniform classification rules. Should a student be denied in-state classification, the student has the right of appeal. The appeal steps are

1. Dean of Admissions and Records
2. Provost and Executive Vice President
3. President of the University
4. Tennessee State Board of Regents

FINANCIAL ASSISTANCE

ASSISTANTSHIPS AND FELLOWSHIPS

A number of Graduate Assistantships are offered in many areas of study. To be eligible for a Graduate Assistantship, students must be unconditionally admitted to a degree program, enrolled full-time, and making progress toward the degree. To retain their Assistantships, students must make at least a 3.0 cumulative grade point average. Graduate Assistants are required to work approximately 20 hours per week. Those assignments may include some instructional assistance (teaching assistants are usually doctoral students), research assistance, or administrative assistance. Appointments provide a monthly stipend and most include tuition and fees. Information and application may be obtained from the department in which the student plans to study or from the Graduate Studies Office. Nonresident assistants appointed for the preceding spring semester are eligible for in state fees for summer whether or not the student holds an assistantship in that summer term.

THE WALTER STROTHER DAVIS SCHOLARSHIP AWARD

In memory of Dr. Walter S. Davis, President of Tennessee State University, 1943-1968, Mrs. Ivanetta Davis, his wife, and Dr. Ivan Davis, his son, established the Walter Strother Davis Scholarship Fund.

Each Spring, a \$1,000.00 scholarship is awarded to the Tennessee State University graduate who has demonstrated the ability for advanced study and research. The award must be used for study leading to the Master's degree at Tennessee State University.

The scholarship is available only to students eligible for the May graduation. Eligibility is further limited to those students who have a Grade Point Average of 3.75 for the May Graduation. The deadline for application is April 1.

Persons desiring more information or application forms should write to the Dean of Graduate Studies and Research.

FINANCIAL AID

A broad program of financial aid is available. Applicants with outstanding need are advised to consider the possibility of more than one type of aid. Inasmuch as the University cannot supply the financial needs of all of its students, students are urged to also investigate outside aid. To provide a standardized and unbiased financial needs assessment, Tennessee State University subscribes to the College Scholarship Service. Therefore, the Free Application for Federal Student Aid (FAFSA) should be submitted, according to instructions, with all applications for financial aid. Application forms may be obtained from the Student Financial Aid Office, Room 343 Campus Center, Tennessee State University, 3500 John A. Merritt Boulevard, Nashville, TN 37209-1561 (phone: 615-963-5701). Applications are also available on the Internet at www.fafsa.ed.gov.

FEDERAL DIRECT STUDENT LOAN PROGRAM

A subsidized loan is awarded to students on the basis of financial need, and borrowers are not charged interest until they begin repayment. An unsubsidized loan is awarded to students regardless of financial need, and interest is charged from the

time the loan is disbursed. Direct Loans are awarded to regular students enrolled in an eligible program of study at least half time; other general eligibility requirements must be met. For eligibility requirements, borrowing limits, and application process see the Student Guide for Financial Aid (U.S. Department of Education), available in the Financial Aid Office.

FEDERAL WORK-STUDY PROGRAM

The Federal Work-Study Program provides jobs for graduate students with demonstrated financial need, who need income to help pay for their cost of education. The Program provides a salary for work performed on campus in academic or administrative offices. The application requires completion of the FAFSA, available in the Financial Aid Office.

STUDENT AFFAIRS

The Division of student affairs assists students in developing the skills, attitudes, understandings, and insights which will assure full expression of his or her powers as a whole, dynamic person. The major responsibility for administration of Student Affairs Programs resides with the Vice President for Student Affairs.

STUDENT HANDBOOK

The TSU Student Handbook is a means of facilitating communication among the members of the University. It serves as a source of information which will help the student understand his/her privileges, rights, and responsibilities, and university policies.

COUNSELING CENTER

Counseling services regarding vocational, educational, and personal problems are available to students. Professional counselors are available to meet with students on either an individual or small group basis. Students may visit the Counseling Center on a voluntary basis, without referral. Confidentiality is maintained, and appointments can be made in person or by telephone.

Appointments should be made with the receptionist in the Counseling Center, located in Queen Washington Health Center, Second Floor, Main Campus (phone: 615-963-5611).

STUDENT HEALTH SERVICES

The Student Health Service is maintained to safeguard the health of students. The University provides these services through the Queen Washington Health Center. Services are available from 8 a.m. to 4:30 p.m. Monday through Friday (phone: 963-5291). Services include first aid, emergency services, counseling on health problems, referrals, and the communication of pertinent information to consulting physicians, hospitals, clinics and other agencies.

Clinics are held daily, Monday through Friday, by a physician who examines, administers or prescribes treatment and medication. No charges are made for first aid and drugs used in simple treatment. Students' suffering from complex medical/surgical problems are hospitalized at local hospitals of their choice (at their own expense). The University accepts no responsibility for any student requiring hospitalization. Therefore, students are strongly encouraged to enroll in the student

health insurance program. Insurance enrollment information is located in the Student Health Center and Student Affairs Offices.

SERVICES FOR STUDENTS WITH DISABILITIES

The Office of Disabled Student Services seeks to coordinate university-wide services available to students with current medical/psychological documented disabilities. Services range from providing physical accommodations on campus to helping students with learning disabilities succeed in classroom activities. Additionally, the office attempts to:

- Raise the level of educational development for students with disabilities.
- Improve understanding of and support from the University community for students with disabilities.
- Enhance and refine within the Office of Disabled Student Services a basic service program focused on students with disabilities.
- Place emphasis on orientation and survival skills for new students and others who might benefit from these experiences.
- Enrich and expand the learning disabilities tutoring program.
- Monitor development of the physical plant to ensure accessibility and opportunity for students with disabilities.
- Help faculty and staff better understand physical and learning disabilities and provide them with effective methods of working with students with disabilities.
- Use every available opportunity to advocate for special needs of students with disabilities and to seek a means to obtain those services

For further information, contact the Office of Disabled Student Services in room 117 in the Campus Center (phone: 615-963-7400).

HOUSING

On-campus housing is not available for graduate students. Information about off-campus housing is available at the Off-Campus Housing office (phone: 615-963-7256).

POLICY ON ID CARDS

The T.S.U. Identification Card is your official University identification throughout your entire enrollment. This card is your means of identification for library privileges, athletic events and any other University function or services that you may be entitled to receive as a University student. This card is permanent and is to be carried at all times; it is to be presented to secure services and to authenticate privileges at any University facility. There will be a non-refundable fee of \$10.00 charges for lost, stolen or mutilated cards. The fee should be paid at the Cashier's Office and your receipt should be taken to the ID station. Lending this card to anyone or failure to present it when requested by University officials is a violation of University regulations and subjects the holder to disciplinary action.

LIBRARIES AND MEDIA CENTERS

The Martha M. Brown-Lois H. Daniel Library is adjacent to the Floyd-Payne Campus Center. The main library is a three-story, contemporary structure built in 1977. It has 82,000

square feet of space with special study and research facilities for faculty and graduate students. A unique special collections room houses the Library's historical archives, theses, dissertations, art objects, and special collections including documents related to the University's unique and colorful history. The Library houses 442,802 book volumes, subscriptions to 1,386 periodicals with over 93,597 bound periodicals, 15,202 microfilm reels, and 888,562 microfiche sheets. Media Centers on the main and downtown campuses offer audio visual services and a variety of computer based information is available. A full-range of services, including books, microfilm, microfiche, periodicals and computerized data bases is also available at the downtown Avon N. Williams, Jr. facility.

TESTING CENTER

Comprehensive testing services are offered to Tennessee State University students, staff, and faculty, as well as to the general public. The testing staff administers and scores a wide range of standardized tests related to counseling, advanced placement, measurement, proficiency testing, undergraduate admissions, and graduate admissions. Location: Suite C Avon Williams Campus, 330 Tenth Avenue North (phone: 615-963-7111).

INTERNATIONAL STUDENT SERVICES

The International Student Services program at Tennessee State University provides technical assistance to all foreign students in connection with their status in the United States and their communication with the United States Immigration Service and their various Embassies. Also, students are assisted with official communications to their respective home governments, including clearance for foreign currency exchange. In addition, foreign students may utilize the advisor function of the program to assist them in their cultural assimilation into the lifestyle they experience in the United States and to assist them with other needs they may have specific to their status. Location: Room 308, campus Center, Main Campus (phone:615-963-5639).

CAREER DEVELOPMENT CENTER

The Career Development Center assists students in determining their career goals and in securing positions for which they are qualified, and offers follow-up and career counseling services to alumni. These services are free to all students and alumni of the University.

The Center maintains credentials which include personal data, academic and extracurricular achievements, work experience, and faculty evaluations. The credentials are sent to prospective employers at the request of the graduate, faculty member or employer. Credentials, however, are sent only with the permission of the graduate. In addition to assisting graduates in securing positions after graduation, the Career Development Center assists students in securing part-time employment while they are enrolled at the University. Graduate students are advised to register with the Career Development Center, sometimes referred to as the Placement Bureau, which is located in the Campus Center, Room 304 (Phone: 615-963-5981).

GRADUATE STUDENT ORGANIZATIONS

STUDENT ASSOCIATION OF GRADUATE EDUCATION

The purpose of the Student Association of Graduate Education (SAGE) is to promote research, quality education and academic fellowship among graduate students in education. It is housed in the College of Education. Interested students should contact the Office of the Dean of the College of Education.

HONOR SOCIETIES

Phi Kappa Phi and Alpha Kappa Mu are national honor societies open to students in all disciplines. The societies recognize outstanding academic achievement in undergraduate and graduate students.

In the College of Education, there are two honor societies: Psi Chi and Phi Delta Kappa.

Psi Chi is the National Honor Society in Psychology. Since Psi Chi was founded in 1929 as an affiliate of the American Psychological Association and as a member of the Association of College Honor Societies, 326 chapters have been established in colleges and universities of recognized and accredited standing in 49 states. Most of its active members are students. About half of these are undergraduates majoring or minoring in psychology and half are psychology graduate students and faculty members. All are persons whose scholastic prowess must have been demonstrated prior to the rites of initiation. Graduate students elected to Psi Chi at Tennessee State University must have obtained an average grade of 3.40 or better in all graduate courses, with a minimum of eight (8) semester hours of psychology completed, and three letters of recommendation. Regular induction ceremonies are set in the Spring Semester of each academic year. Further information is available from the Department of Psychology.

Phi Delta Kappa is a professional education fraternity for those with careers in education. The goals of the fraternity emphasize research and scholarship. One has to be invited to be initiated by a current member.

Sigma Theta Tau International, Pi Upsilon Chapter is the National, International Honor Society in Nursing. The Society recognizes superior achievement, leadership qualities, creativity, and commitment to the ideals and purposes of the profession. Eligibility requires a 3.5 GPA.

PROFESSIONAL ORGANIZATIONS

Those preparing to teach or work in certificated areas in school settings are encouraged to join the Student Tennessee Education Association (SEA). Tennessee State University has a very active chapter of this professional organization, which is the student arm of the National Education Association. The Tennessee State University Chapter won first place in 1990 as the "Outstanding SEA Chapter" in Tennessee. Membership forms may be obtained from the Office of the Dean of the College of Education or the SEA Advisor.

The Graduate Psychology Student Organization (GPSO) is open to current Tennessee State University graduate students in Psychology. The purposes of this organization are to:

1. establish and promote relations between graduate psychology students and faculty;
2. act as representative for all graduate psychology students in the pursuit of excellence in the professional preparation of psychologists;
3. unify students through educational and social functions;
4. establish clear communication avenues between the University administration, faculty, and students;
5. aid the interchange of ideas between students and professionals, and
6. promote and uphold the interest of students and aid faculty by participation in the administrative processes.

Further information is available from the Department of Psychology.

ACCESS TO EDUCATIONAL RECORDS

EDUCATIONAL RECORDS

Educational Records are defined as those records, files, documents, and other materials which (1) contain information directly related to a student; and (2) are maintained by Tennessee State University or by a person acting for the University. "Records" means information recorded in a medium, including but not limited to the following: handwriting, print, tape, 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). All credentials become the property of the University and will not be forwarded or returned. Credentials will be maintained in active files for a 12 month period after which credentials will be relegated to inactive status and must be submitted again before an admission decision will be made. The applicant is advised to have all credentials on file well in advance (preferably thirty days) of the registration period for the term for which application is made.

STUDENT

A student is any person who is or has been enrolled at Tennessee State University. An applicant who does not enroll or who is declared ineligible has no inherent right to inspect his 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 52 of the Internal Revenue Code of 1954, and who presents such proof to the custodian of the educational records. Normally, this proof will be written affirmation by the student and the parent declaring that the student is a dependent for federal income tax purposes.

DIRECTORY INFORMATION

Directory information is defined as: "name, address, telephone listing, date and place of birth, major field of study, 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." At

the time a student registers for courses, the student may notify the Office of Admissions and Records (this must be done in writing) that directory information for the student may not be released. This notification is effective only for the semester for which the student is then registering.

ACCESS

To have access to an Educational Record is to be allowed to see the original record. This implies the right to obtain copies of that record.

RELEASE OF PERSONALLY IDENTIFIABLE STUDENT EDUCATIONAL RECORDS

Tennessee State University shall not permit access to, or release of, any information in the Educational Records of any student that is personally identifiable, other than Directory Information, without the written consent of the student, to any other than the following:

1. Tennessee State University officials and staff who have legitimate educational interest; Education records and personally identifiable information obtained from those records may be disclosed without the student's consent to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic, research, or staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill institutional duties.
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 regulations concerning the law;
5. State officials and officials authorized by State statute;
6. Organizations conducting studies for or on the behalf of Tennessee State University 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 dependent students as defined in Section 152 of the Internal Revenue code of 1954 (Written consent may be allowed from either of the separated or divorced parents subject to an 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 the student is notified in advance of the compliance; or
10. Appropriate persons in connection with an emergency, if knowledge is necessary to protect the health or safety of a student, or other persons.

With the exception of Tennessee State University officials and staff who have been determined by the University to have legitimate educational interest, all individuals and agencies who have requested or obtained access to student's records 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 obtained the information.

PROCEDURES FOR ACCESSING EDUCATIONAL RECORDS

The student requests the custodian to allow him or her to inspect the Educational Record. The student may ask for an explanation and/or copy of the Educational Record. The price of copies shall not exceed the cost of duplication of the record. After consultation with the custodian, errors may be corrected at that time by the custodian. If there is a disagreement between the student and the custodian as to the correctness of the data contained in the record, the student, after exhausting reasonable means of reconciliation with the custodian, 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 chairman of the University Appeals Committee. The chairman shall call a meet-

ing of the committee or place this matter on the agenda for the scheduled meeting no later than forty-five days after receipt of the written appeal and challenge. The committee will allow the student to present evidence to substantiate his or her appeal and shall render a written decision to the student within forty-five days after the meeting. This procedure does not provide for a hearing to contest academic grades.

RIGHT TO ACCESS DOES NOT INCLUDE

1. Financial records of parents or any information therein;
2. Confidential letters and statements of recommendation which were placed in the Educational Records of the 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 purposes that they were intended.)

DESTRUCTION OF RECORDS

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



ADMISSIONS REGULATIONS POLICIES

ADMISSION TO GRADUATE STUDIES

All students desiring to enroll for graduate study must apply through the Office of the Dean of Graduate Studies and Research.

Admission to the Graduate School permits the applicant to enroll in graduate courses for which the applicant is prepared, but does not imply that the applicant will be approved for admission to a degree program or to candidacy for a graduate degree.

APPLICATION DEADLINES

Priority application deadlines for all programs, except Biological Sciences, Ph.D., Counseling Psychology, M.S., Criminal Justice, Nursing, Psychology, Ph.D., Occupational Therapy, Physical Therapy, and Speech Pathology:

Fall Semester	July 1
Spring Semester	November 1
Summer Semester	April 1

Submission of complete applications by the above priority deadlines will insure consideration by the admission committees.

For the following programs, all application documents must be submitted by the deadline indicated below to insure consideration by the admission committees.

Criminal Justice:

Fall Semester	June 15
Spring Semester	November 1
Summer Semester	April 15

Nursing:

Summer Admission	March 15
Fall Admission	July 15

Speech Pathology:

Fall Admission Only	February 1
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Biological Sciences Doctoral Program:

Fall Admission only	March 15
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Occupational Therapy: February 15

Physical Therapy: February 15

Psychology

Doctoral Program:

Fall Admission Only	December 1
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Counseling Psychology (M.S.):

Fall Admission Only	March 15
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Late applicants are not guaranteed placement in specific classes (see section on "Non-degree Students").

GENERAL REQUIREMENTS FOR ADMISSION TO GRADUATE STUDIES

1. An application for admission on the approved application form accompanied by a \$25.00 non-refundable application fee.
2. A baccalaureate degree from an accredited college or university which offers undergraduate programs which are prerequisites for the degree program at Tennessee State University.

3. Official transcripts from the registrar(s) of all colleges and universities attended (including Tennessee State University) sent to the School of Graduate Studies and Research. Official transcripts must be received before application for admission will be reviewed.

Note: Consult the TSU Web site (www.tnstate.edu) for any changes in admissions standards approved after the preparation of this Catalog.

FALSIFYING ACADEMIC RECORDS

It is a Class A misdemeanor to misrepresent academic credentials. A person commits the offense of misrepresentation of academic credentials who, knowing that the statement is false and with the intent to secure employment at or admission to an institution of higher education in Tennessee, represents, orally or in writing that such person:

- (1) Has successfully completed the required course work for and has been awarded one (1) or more degrees or diplomas from an accredited institution of higher education;
- (2) Has successfully completed the required course work for and has been awarded one (1) or more degrees for diplomas from a particular institution of higher education; or
- (3) Has successfully completed the required course work for and has been awarded one (1) or more degrees or diplomas in a particular field or specialty from an accredited institution of higher education.

PROOF OF IMMUNIZATION

The State of Tennessee requires students entering college 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 the appropriate form is filed in the health center. For additional information, contact: the Health Center at (615) 963-5291.

The State of Tennessee as of July 1, 2002 requires all new incoming students obtain an inoculation for meningococcus or sign a waiver stating that they do not want the vaccine. This is an act to amend Tennessee Code Annotated, Title 49, relative to vaccinations for meningococcal disease. Students with asthma, diabetes or other chronic health problems should make arrangements with their primary care provider to receive flu shots.

Note: As of Fall 2003 TSU will begin a Hepatitis awareness campaign. Students are urged to get vaccinated for Hepatitis A and B. Students and parents should contact their Primary Care Provider for this immunization.

REQUIREMENTS FOR ADMISSION TO DOCTORAL PROGRAMS

Applicants for Doctoral programs have only one category of admission: Unconditional. Specific admission requirements for the Ed.D. programs in the Administration and Supervision, Curriculum and Instruction, and the Ph.D. programs in Computer Information and Systems Engineering, Biological Sciences, Psychology and Public Administration can be found in the appropriate sections of this Catalog. See also the table Program Requirements for Admission to Graduate Programs.

REQUIREMENTS FOR ADMISSION TO SPECIALIST IN EDUCATION PROGRAM

Applicants for the Specialist in Education Program have one category of admission: Unconditional. See Departments of Educational Administration and Psychology.

REQUIREMENTS FOR UNCONDITIONAL ADMISSION TO MASTER'S DEGREE PROGRAMS

Admission to a Master's Degree program requires:

1. Meeting the General Requirements for admission to graduate study, above.
2. An undergraduate grade point average of at least 2.50 on a 4.00 system of grading (exceptions: Business Administration M.B.A. program, Engineering M.E. program, Computer and Information Systems Engineering M.S. program, and Master of Public Administration program).
3. An acceptable score on the Graduate Record Examination (GRE), the Miller Analogies Test (MAT), (exceptions: Master of Science in Nursing Fundamentals of Engineering (FE), the Graduate Admissions Management Test (GMAT), or other approved tests as required for admission to the specific degree program for which application is being made. (See the table Program Requirements for Admission, and the admission requirement for a specific degree program which may be found in this Catalog under the appropriate school or college.). Test scores must not be more than six years old.
4. Meeting all additional program or department admission requirements (e.g., letters of recommendation, applicant essay, completion of undergraduate prerequisite course work, etc.) indicated in this Catalog under graduate program descriptions.
5. Good standing in the last school attended.
6. Acceptance by the graduate program/department and the Dean of the School of Graduate Studies and Research, and receipt of letter of acceptance from the Dean of the School of Graduate Studies and Research.

CONDITIONAL ADMISSION TO MASTER'S DEGREE PROGRAMS

Conditional Admission into a Master's Degree program may be granted temporarily by the Dean of Graduate Studies and Research upon the recommendation of the graduate program/department. Continuation in the program as a degree-seeking student is contingent upon fulfilling specific requirements stipulated in the conditional admission letter.

The following are the circumstances in which Conditional Admission may be granted (see departmental sections for information on Conditional Admission to specific programs—some programs do not grant Conditional Admission):

- a. Those who have a limited number of deficiencies in undergraduate course prerequisites. These deficiencies must be removed before enrollment in graduate courses of the same series.
- b. Graduates of accredited colleges who have not taken the Graduate Record Examination, Miller Analogies Test, or other entrance test before admission. Applicants admitted to degree programs must take the GRE, MAT, or GMAT, etc. during the first semester of enrollment in courses for graduate credit.

- c. Graduates of recognized four-year colleges not accredited when the bachelor's degree was awarded. Such applicants must:
 - (1) present a record of superior scholarship on the undergraduate level
 - (2) present unqualified recommendations from their undergraduate advisors; and,
 - (3) submit an official report of performance on the GRE, MAT or the GMAT or other required test.
- d. Students who present a quality point average below 2.5 must at the time of application submit GRE or MAT scores which qualify them for admission (see departmental sections for specific score requirements). After admission, those students are required to take nine (9) semester hours of course work specified by the graduate coordinator of the programmatic major field. If a 3.00 quality point average is attained, the student is permitted to petition for a change of classification.

Note: Students who have been conditionally admitted to a master's program must satisfy all stipulated conditions by the time a program of study is filed or prior to accumulating a maximum of 15 graduate hours. A test score condition must be met within the first semester of enrollment in courses for graduate credit. A maximum of 15 hours of graduate work will be counted toward the degree when admission requirements are met.

NON-DEGREE ADMISSION

Applicants must meet general admissions requirements of the Graduate School, and must have met all prerequisites for the courses in which they seek enrollment. Non-degree admission to the Graduate School is granted to those who wish to enroll in courses but do not intend to qualify for a degree. The non-degree admission category includes those entering Graduate School for these purposes:

- a. to complete certification requirements, students should consult with the certification officer in the College of Education;
- b. to earn thirty plus (30+) hours beyond the Master's degree;
- c. to enrich their professional development;
- d. to transfer credits earned to a degree program at another institution.
- e. to take courses pending admission to a degree program (9 hour maximum)
- f. to enroll in the Certificate Program in Health Administration and Planning.

Credits earned in the non-degree category are not ordinarily requirements for degrees. If subsequently, a student classified as non-degree is accepted into a degree program, the student may by petition, if approved, carry forward not more than nine (9) semester hours of credit previously earned as a non-degree student in graduate-level courses, provided that the grade in each course is not less than 3.0.

Departments may restrict non-degree students to designated courses only. Non-degree students must have the approval of the department head (or designee) to enroll in a class.

Degree/Program Admission Requirements for Admission				
See individual Programs for more specific information				
School/College/Institute Program	Degree Offered	Letters of Reference	Required Test	Other
School of Graduate Studies & Research				
Non-Degree Seeking	None			
School of Agriculture & Consumer Sciences				
Agricultural Sciences	M.S.		GRE—(V, Q, & S) or MAT	
College of Arts & Sciences				
Biology	M.S.	2	GRE—(V&Q)	Personal Statement
Biological Sciences	Ph.D.	3	GRE—(V, Q & S)	Personal Statement
Chemistry	M.S.		*GRE—(V, Q, & S)	
Criminal Justice	M.C.J.		*GRE—(V, Q) or MAT	
English	M.A.		*GRE—(V, Q, & S) or MAT	
Mathematical Sciences	M.S.	2	GRE—(V&Q)	
Music	M.S.		MAT	
College of Business				
Business Administration	M.B.A.		GMAT	
College of Education				
Administration & Supervision	M.Ed.		*GRE—(V, Q, & S) or MAT	
	Ed.S.		GRE—(V & Q) or MAT	
	Ed.D.	4	GRE—(V & Q) or MAT	Resumé (work experience record); Writing Sample
Human Performance & Sports Sciences	M.A.Ed.		*GRE—(V, Q, & S) or MAT	
Curriculum & Instruction	M.Ed.		*GRE—(V, Q, & S) or MAT	
	Ed.D.	4	GRE—(V & Q) or MAT	Resumé (work experience record); Writing Sample
Advanced Studies in Teaching & Learning	M.Ed./RODP		*GRE—(V, Q, & S) or MAT	(Consult department)
Elementary Education	M.Ed.		*GRE—(V, Q, & S) or MAT	
Special Education	M.Ed.		*GRE—(V, Q, & S) or MAT	
Psychology	M.S.	3 (C. PSY only)	*GRE—(V, Q, & S) or MAT	Personal Statement (Counseling Psychology only)
	Ph.D.	3	GRE—(V & Q) or MAT	Resumé; Supplemental Application (Counseling Psychology only)
School Psychology	Ed.S.		GRE—(V & Q) or MAT	
Guidance & Counseling	M.S.	3	*GRE—(V, Q, & S) or MAT	Statement of Purpose
College of Engineering, Technology and Computer Science				
Engineering	M.E.		FE (if GPA is less than 2.74 on 4.0 system)	
Computer & Information Systems Engineering	M.S.			
Computer & Information Systems Engineering	Ph.D.	3		Letter of Intent
College of Health Science				
Speech & Hearing Science	M.S.	3	GRE—(V & Q) or MAT	Statement of Intent
Physical Therapy	D.P.T.	3	GRE—(V, Q, & AW)	Essay
Occupational Therapy	M.O.T.	3	GRE—(V & Q)	Personal Essay
Institute of Government				
Public Administration	M.P.A.	3	GRE—(V&Q)	Statement of Purpose
	Ph.D.	3	GRE—(V&Q)	Statement of Purpose; Writing Sample
Professional Studies	M.P.S./RODP	3	GRE—(V, Q & AW)	Statement of Purpose
School of Nursing				
Nursing	M.S.N.	3		Personal Statement; Resumé; Documentation of current professional nursing experience.
	M.S.N./RODP	3		(Same as above)

* Total Minimum required score on "V & Q" is acceptable.

NON-DEGREE STUDENTS

The Dean of Graduate Studies and Research is the Advisor for all non-degree students. These students are those who have checked "NON-DEGREE" on the Application for Admission. They may also be classified as students earning thirty hours or more beyond the master's, students qualifying for certification, students earning credit to transfer to another university (transient students), or students pending acceptance into a degree program.

If any of these students desire to change their status to degree seeking, they must complete a "Change of Program or Personnel" form or an application for admission to the Graduate School, submit all required documents such as test scores, and subsequently be recommended for admission to the graduate degree program by the Graduate Faculty in that unit, in accordance with individual departmental program requirements.

PROCEDURES FOR ADMISSION

A prospective student should apply for admission at least six weeks before the beginning of the semester in which the student wishes to enroll. The applicant who does not enter the Graduate School during the term of admission indicated on the application form must re-apply. The procedures for admission are these:

1. Complete Graduate Admissions application form available in the Graduate School Office. Select one major from the list provided on the application form, check the semester of enrollment, and indicate the degree sought;
2. Return the completed application form with the \$25.00 non-refundable fee to the Graduate School;
3. Request the registrar(s) of all colleges and universities attended (including Tennessee State University) to send one official transcript to the Graduate School;
4. Submit official copies of all test scores appropriate to the degree program to the Graduate School.

All documents, including transcripts submitted for admission, become the property of the University and will not be returned.

A person who wishes to take courses for graduate credit, whether or not that person desires to become a candidate for a degree, must make formal application for admission to the Graduate School.

PROCEDURES FOR READMISSION

Readmission applies to those students who have not been in continuous enrollment in Graduate School. For example, students who did not enroll in courses during Fall or Spring semester of a given academic year must reapply for admission to the Graduate School. The procedures for readmission are these:

1. Complete the application form provided by the Graduate School. Be sure to check READMISSION;
2. Return the completed application form to the Graduate School;
3. Request the registrar at universities attended, during the period that you were not enrolled, to send official transcripts to the Graduate School.

ADMISSION OF INTERNATIONAL STUDENTS

The Graduate School accepts students from other countries who apply and meet United States admission standards.

INTERNATIONAL APPLICANTS MUST SUBMIT

1. A completed application for Admission to Graduate School;
2. Certificates of proficiency in English or minimum score of 500 (Paper Test) or 173 (Computer-based Test) or 61 (Internet-based Test) on the Test of English as a Foreign Language (TOEFL);
3. Official transcripts or authorized school records with a listing of courses and grades received; such transcripts must have been evaluated by a foreign educational credential agency, at the student's expense;
4. Evidence of financial resources sufficient to provide tuition and fees for the academic year;
5. The \$25.00 non-refundable application fee;
6. Applicable test scores, such as GMAT, GRE, FE, MAT, etc.;
7. All international students applying for admission who have a student visa shall submit a certificate from a licensed physician or the qualified medical authority verifying freedom from tuberculosis within thirty (30) days from the first day of classes. Failure to submit such certificate shall result in denial of further enrollment or admission. In the event that the student either has tuberculosis or has potential tuberculosis requiring medical treatment, continued enrollment will be contingent upon the determination by a licensed physician that further enrollment does not present a risk to others and upon the student's compliance with any prescribed medical treatment program.

Note: It is mandatory that all F-1 students have health insurance upon enrollment for the duration of their studies. The policy must include a clause of Medical Evacuation and Repatriation of \$10,000 each.

8. After admission, copies of Visa or Alien Registration card must be submitted before student may enroll.
9. Internationals transferring must submit to their current school the "Immigration Information" form for a release date, before processing of an I-20.

TRANSIENT GRADUATE STUDENTS

Students who have been admitted to a degree-granting program at another institution and who wish to take courses for credit to be transferred to that institution must do the following prior to the date of registration:

1. Complete the "Permission for Enrollment as a Transient Student" form or present a letter from the institution that states the student has been granted permission to take courses for credit to be transferred to that institution;
2. Complete the application for admission form provided by the Graduate School;
3. Pay the \$25.00 non-refundable application fee.

RESIDENCY CLASSIFICATION

The Admissions Office is charged with the determination of a student's residency status for fee-paying purposes and as the basis for some University admission requirements. Classification is determined by information submitted on the admission application and/or application for re-classification. Notification in writing is made soon after the student applies for re-classification.

The deadline dates are:

Summer Session	April 1
Fall Semester	July 1
Spring Semester	November 1

All decisions are based on regulations established by the Tennessee State Board of Regents, with the intent that all Tennessee public institutions of higher education apply uniform classification rules. Should a student be denied in-state classification, the student has the right of appeal. The appeal steps are

1. Dean of Admissions and Records
2. Provost and Executive Vice President
3. President of the University
4. Tennessee Board of Regents

ADVANCED GRADUATE ADMISSION FOR UNDERGRADUATES

An undergraduate senior student at Tennessee State University with a minimum cumulative GPA of 3.0 who is enrolled in the last term of course work that will complete the requirements for a bachelor's degree, may request advanced graduate admission to enroll in 3 to 6 hours of graduate courses provided the total course load does not exceed 12 hours. Courses for seniors are limited to first-year graduate level courses. Graduate courses may not be used for credit toward an undergraduate degree. The Combination Senior is not considered a graduate student but may apply for admission to a graduate program upon completion of the bachelor's degree.

However, advanced admission to take graduate courses does not guarantee subsequent admission to a graduate program. Courses taken for graduate credit may count toward a graduate degree when/if the student is admitted to a degree program at TSU and if approved by the program's graduate coordinator and departmental chairperson. The form for Advanced Graduate Admission and an Application to the Graduate School must be completed six weeks prior to the beginning of the semester in which advanced admission is sought.

AUDITING A COURSE

Students who plan to audit a course must indicate at the time of registering that they are auditing. The regular registration procedure is followed. Students are not held to attendance or evaluation requirements for the course, and credits earned by audit may not be used to meet degree requirements. The audit fee is the same as the credit fee.

INSTITUTES, WORKSHOPS, AND SPECIAL PROGRAMS

Applicants for admission to institutes, workshops, and other special programs which offer graduate credit must submit a graduate application, transcripts of all previous work, and a twenty-five dollar admission fee to Graduate School. Test scores are not required. An application for acceptance in the special program must be submitted to the program director. Successful applicants must receive written approval of both the director of the special program and the Dean of Graduate Studies. Credits earned in Institutes, Workshops, and Special Programs do not count toward degree requirements, but may be acceptable by the State Department of Education for certificate renewal and thirty plus (30+) hours above the Master's degree.

TRANSFER CREDIT

At the master's level, a student may be allowed a maximum of twelve (12) semester or eighteen (18) quarter hours of graduate credit from another accredited college or university. At the educational specialist and doctoral level, a maximum of six (6) semester hours may be transferred. The Transfer of Credit form may be obtained from the departmental office. The course work being considered for transfer must be evaluated by the graduate coordinator, dean of the academic unit and the dean of the Graduate School. Only courses in which the student earned grades of "B" or better, and which are taken within the degree program time limit, will be considered for transfer. Credits earned in partial fulfillment of a previous completed degree program at Tennessee State University or any other institution may not be transferred or used for credit in another degree program.

CLASS LOADS

Regular Students

Full-time status is attained when the graduate student enrolls in at least nine (9) credit hours in one semester. When a student enrolls in any courses for credit, the maximum class load for either the fall or spring semester shall be twelve (12) hours. Students may take up to fifteen (15) hours with an over-load approval. The maximum load for either Summer Session I or Session II shall be six semester hours credit. Students desiring to carry an over-load must have the endorsement of the Major Advisor or the Dean of the School, and the Dean of Graduate Studies.

SECOND MASTER'S DEGREE

Students may not be simultaneously enrolled in two Master's degree programs. Credits earned to fulfill requirements for the first Master's degree may not be used to satisfy any of the requirements for the second Master's degree, or reduce the number of hours for the second master's degree.

WITHDRAWAL FROM CLASSES AND/OR THE UNIVERSITY

The deadline for withdrawing from classes and/or the university is specified in the calendar for each semester.

The proper forms for withdrawing from a class will be provided by the Office of Admissions and Records. Withdrawal is official only after the form has been completed and submitted to the Office of Admissions.

If a student never attends a class officially registered for, or stops attending a class without officially withdrawing, that student will be assigned a final grade of “F”.

ACADEMIC STANDARDS

GRADING SYSTEM FOR GRADUATE DEGREES

Graduate instruction assumes that the student has both the interest and the ability to do independent study and research of outstanding quality. Thus, a graduate student must maintain a minimum average of “B” (3.0 quality points on a 4.0 point system) in all graduate work. Course grades are: A, B, C, D, and F. In master’s degree programs, grades less than “C” are counted in compiling the general average, but they may not be included in the requirements for the degree. For information about “C’s” in doctoral programs, please see specific program in this Catalog.

The grade of “I”, incomplete, indicates that the student’s work in a course is incomplete but otherwise satisfactory. The “I” grade must be removed from the graduate student’s permanent record within one semester from the end of the term in which the “I” grade was awarded. If all requirements for removal of the “I” are not met within this period, the “I” grade will be changed to “F” by the Office of Admissions and Records. All enrollments in dissertation, thesis, or project writing courses shall carry the grade of “I” until the project is completed. The final letter grade is awarded to each previous enrollment where an “I” was awarded.

GRADE APPEAL

The University recognizes the right of a student to appeal a grade which she/he believes is incorrect and does not reflect the student’s class performance. Issues related to harassment (sexual, racial, or other) should be referred to the Affirmative Action Officer.

Students who believe an incorrect grade was awarded should seek a resolution with the instructor as soon as possible. If the student is not satisfied after attempting to reconcile the matter with the instructor, the student may appeal to the head of the department. This appeal must be in writing, accompanied by an relevant supporting documents, and must be initiated within 30 calendar days of the beginning of the semester immediately following the semester in which the grade was awarded (excluding summer school).

The department head should provide a copy of the student’s letter to the instructor and request a written response from the instructor. The instructor will provide the department head with a written response within 10 working days. (Exceptions will apply when the instructor is not teaching, as in summer session, or when the instructor is on leave.) In instances where an instructor indicates to a student that a grade adjustment is warranted, and fails to make the adjust within ten working day, the student should inform the instructor’s department head.

If the student is not satisfied with the decision of the department head, a further written appeal may be made to the Dean of the College/School. This appeal must be made within ten calendar days of the decision of the department head. After reviewing the appeal record, the Dean must render a decision within ten days of the receipt of the appeal, after which the Provost is the next level of appeal.

If the instructor happens to be the department head or the dean, the appeal will be submitted to the next higher academic officer (that is, to the dean if the department head is the instructor or the Provost if the dean is the instructor). In such cases, the decision of the Provost is final.

Grades, transcript information, drop/adds, withdrawals and other data perceived by the student to be in error must be protested by the student within thirty days. Appeals made after this time will not be reviewed.

“I” GRADE EXCEPTION

All enrollments in dissertation, thesis, or project writing courses, except the last, shall be entered on the permanent records as “I”. In Thesis Writing, only the last enrollment shall carry the letter grade and the number of credit hours earned. However, in dissertation writing, the final letter grade is awarded to each previous enrollment where an “I” was awarded, up to the maximum number of hours set by the program.

REPEATING A COURSE

A given course may be repeated one time only, and the second grade will replace the first. A student may repeat a maximum of two (2) courses in a given program for the purpose of improving grades. Departments may establish more restrictive policies.

RETENTION

A cumulative average of “B” (3.0 quality points) in all graduate courses taken at Tennessee State University is required for graduation.

PROBATION AND SUSPENSION

If a student has completed nine (9) or more semester hours of graduate work earning an average less than 3.0, that student will be placed on scholastic probation. Probationary status must be removed by raising the cumulative grade average to a “B” or better during the next nine (9) hours of graduate work following the probationary period. Failure to raise the cumulative grade point average to “B” or better will result in suspension from the Graduate School. Students who have been suspended may apply for readmission after one full semester. Summer terms are not counted toward this requirement.

READMISSION AFTER SUSPENSION

Readmission is subject to the approval of the Dean of the Graduate School in consultation with the Graduate Council Appeals Committee, and with the appropriate graduate coordinator and Dean. Readmitted students who fail to maintain a minimum cumulative average of “B” during any semester after readmission, will be dropped permanently from the Graduate School.

TIME IN RESIDENCE

All candidates for the Master's degree must spend two semesters of study in residence at the University after admission to Graduate School program.

Students in the Ed.D. program must establish academic residency by completing a minimum of eighteen (18) hours at Tennessee State University, excluding dissertation credit, over a period of four (4) academic year semesters or two (2) academic year semesters and two (2) summer registrations (two sessions per one summer equals one registration).

Students pursuing the Ph.D. program in Psychology must enroll full-time for two (2) consecutive semesters [nine (9) hours each semester].

A student in the Ph.D. degree program in Public Administration must establish academic residency at Tennessee State University before being advanced to candidacy. The student may meet residency requirements by completing two of the five seminars for the Doctoral core seminars and two quantitative skills seminars within a two year period.

Students in the Biology Ph.D. program must meet residency requirements by completing a minimum of eighteen graduate credit hours at Tennessee State University during an academic year consisting of three consecutive semesters, which may include a full summer term and one semester.

Students in the Computer Information and Systems Engineering Ph.D. program must meet the residency requirements by completing a minimum of twenty-seven (27) graduate credit hours at Tennessee State University. The student may meet the residency requirement by completing all the required core courses and at least two (2) seminar courses.

TIME LIMITATIONS FOR COMPLETING DEGREE REQUIREMENTS

All requirements for the Master's degree and Educational Specialist degree must be completed within six calendar years, beginning with the first semester of enrollment in courses for graduate credit. Graduate courses taken more than six (6) years prior to completion of all degree requirements must be repeated in order to be included in the credit hour requirement for the degree, except in certain substantiated cases of extreme hardship.

Credits earned more than ten (10) years prior to the student's graduation cannot be applied toward meeting requirements for the Ed.D. or Ph.D. degrees.

EXTENSION OF TIME LIMITATIONS

Extension of time for completing course requirements may occasionally be granted because of interruptions in graduate studies due to extenuating circumstances, such as family leave, illness, or military services.

In case of illness, the student is required to present to the Dean of Graduate Studies a notarized certificate from a fully qualified attending physician indicating (a) the general nature of the illness, (b) the duration of the illness, (c) the extent of the disability, and (d) if employed during illness, limitations on activities required by the attending physician. The University reserves the right to consult the University medical staff if making final decisions on such certificates.

In case of military services, the student must present evidence of service while enrolled in the Graduate School, or during regular intervals of enrollment.

All petitions to extend the program of study beyond the degree program time limits must be submitted by the student before the courses expire, using the Graduate School Appeal/Petition Form. Following positive recommendation by the Advisor, Department Head, and academic Dean, the petition will be sent to the Graduate School for review by the Graduate Council Appeals Committee, and finally the Graduate Council. The decision of the Graduate Council is final.

Extensions will be granted with the following stipulations.

- 1) There will be only one such extension granted, for a time period specified on the Appeal/Petition Form.
- 2) Courses taken outside the degree program time limits may not be counted toward the degree unless they are revalidated to demonstrate that mastery of knowledge/ skills is current. Revalidated courses are added back to the Program of Study.
- 3) The plan for revalidation must be prepared in conjunction with the student's major department, and submitted with the Appeal/Petition Form.
- 4) Mechanisms for revalidating out-of-date courses are limited to the following:
 - re-taking expired courses;
 - taking related courses (equal in credit hours to the expired courses) approved by the department, and added to the Program of Study;
 - taking a competency test (qualifying or comprehensive examination) administered by the department.
- 5) Revalidation will only apply to courses on the approved Program of Study or approved as transfer credit for inclusion on the Program of Study.
- 6) Students who have been out of school for one or more semesters must apply readmission to the Graduate School.
- 7) Departments may reserve the right to deny extensions. No extension will be reviewed by the Graduate School without recommendation from the Advisor, Department Head and academic Dean.
- 8) If approved for an extension, documentation of completion of the approved revalidation plan must be submitted to the Graduate School by the department, and the Program of Study must be submitted or revised to indicate revalidated courses.

APPEAL/PETITION PROCESS FOR: ADMISSION DECISION, READMISSION FOLLOWING SUSPENSION, RETENTION IN DEGREE PROGRAM, TIME EXTENSION FOR COMPLETING DEGREE REQUIREMENTS.

Appeals/Petitions for any of the above reasons are subject to the approval of the Dean of the Graduate School in consultation with the Graduate Council Appeals Committee, and with the appropriate graduate Coordinator, Department Head and Dean. Students should complete the Appeal/Petition form provided by the Graduate School, and submit to the Advisor/Coordinator. The signed form will be given to the Graduate Council Appeals Committee for review and recommendation. The Graduate Dean's decision is final. (Note: Admission Decision Appeals are submitted directly to the Graduate School.)

APPLICATION FOR GRADUATION

The Application for Graduation must be completed early in the semester before the student intends to graduate (dates are given on TSU website). If the student does not graduate in the semester for which the application was made, another application must be submitted for the intended semester of graduation.

HUMAN SUBJECTS

All research involving Human Subjects must be approved prior to initiating data collection, in accordance with guidelines and procedures available on the TSU Office of Sponsored Research Web Site: www.tnstate.edu/research.

ACADEMIC INTEGRITY STATEMENT

Conferral of a graduate degree implies personal integrity and knowledge of scholarly methods. There are three areas in which graduate students should be particularly cautious: (1) proper citation of works by others, (2) the use of copyrighted material, and (3) adherence to research ethics.

Any material taken from another work must be documented, and in no case should one represent another's work as one's own: this includes information received from others during examinations or submitting another's assignments, papers, etc. as one's own. In order to avoid questions of plagiarism, students involved in collaborative research should exercise extreme caution. If in doubt, students should check with the major professor and the graduate school about the project. Plagiarism will be investigated when suspected and sanctioned if established. (Based on: Tennessee Conference of Graduate Schools Guide to the Preparation of Theses and Dissertations (1992).

Because the purpose of any university is the origination and honest dissemination of knowledge, any act that fails to forward those aims must be judged unethical. Plagiarism is such an act, and is defined as the presentation of another's works or ideas as one's own. This includes the unacknowledged word for word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas. To avoid plagiarism, every direct quotation must be identified by quotation marks or by appropriate indentation and must be properly cited in the text or in a footnote. Acknowledgment is required when material from another source stored in print, electronic or other medium is copied, quoted, paraphrased or summarized in whole or in part in one's own words. All violations of academic honesty are subject to appropriate administrative sanction, and any student who submits plagiarized work to satisfy an academic requirement will be subject to dismissal from his or her graduate program and the University.

REQUIREMENTS FOR GRADUATE DEGREES

MASTER'S DEGREES

CANDIDACY AND PROGRAM OF STUDY

Admission to candidacy is an important step in the student's progress toward a degree. The step indicates that the student has successfully completed an important portion of his/her graduate studies, has outlined the remainder of his/her program of study, is considered a capable graduate student and is viewed as a worthy candidate for an advanced degree in his/her field of specialization. Recommendation for candidacy, therefore, is based upon performance on admission tests, completion of prerequisite courses, class work, and professional behavior. Performance in core courses and major field courses is deemed significant. Students must apply for admission to candidacy after they earn at least nine (9) semester hours of graduate credit but before having earned fifteen (15) credit hours. The Program of Study and Advancement to Candidacy form should be completed in consultation with the advisor, signed by the appropriate persons and returned to the Graduate School. Changes in the approved Program of Study require the written approval of the adviser and the Dean of the Graduate School. The Change of Program or Personnel form may be obtained from the Graduate School.

PROCEDURES FOR ADMISSION TO CANDIDACY

When the student has completed nine (9) semester hours of graduate credits with a cumulative grade point average of 3.00, and has removed all incomplete (I-grades) from the permanent record in the Office of Admissions and Records, and met any admissions conditions, the student is ready to be admitted to candidacy.

STUDENTS NOT ADMITTED TO CANDIDACY WHO HAVE SUCCESSFULLY COMPLETED NINE HOURS OF GRADUATE CREDIT

After successful completion of nine (9) semester hours but not more than fifteen (15) semester hours of graduate course work with a grade point average of 3.0 or above, the student must be advanced to candidacy. The student who is not advanced to candidacy will not be allowed to take additional course work. Students who have been conditionally admitted to a master's program must satisfy all stipulated conditions by the time a Program of Study is filed or prior to accumulating a maximum of 15 graduate hours. A test score condition must be met within the first semester of enrollment of courses for graduate credit. A maximum of 15 hours of graduate work will be counted toward the degree when admission requirements are met.

Courses taken after the term in which the fifteen (15) hours were completed may not apply toward the completion of the requirements for the degree.

No student will be permitted to graduate the same semester in which Candidacy is achieved.

It is the primary responsibility of the student to be familiar with the policies and regulations governing advancement to candidacy.

MASTER OF ARTS

The Master of Arts degree requires a minimum of 30 credit hours of graduate course work. Students majoring in English have the option of writing three course papers in lieu of the thesis or a project.

Most candidates for this degree are required to demonstrate a reading knowledge of foreign language prescribed by the Major Advisor. The examination in the foreign language consists of two translations, each to be completed in one hour. The first must be accomplished with no aids. The second translation of a more sophisticated passage in the language may be accomplished with a dictionary.

The foreign language requirements may also be satisfied by successful completion of French 5000 or Spanish 5000.

Students desiring to take the examinations should apply as early as possible during their course of study. At the appropriate time, the student declares intent to be examined to the Head of the Department of Languages, Literature and Philosophy, and presents to that Department Head official forms for the grade report. The grade report forms can be secured from the Graduate School.

Students majoring in English have an option to the foreign language requirement. This option is to pass one of the following courses: ENGL 5050, 5090, or 5100. If one of these courses is used to satisfy the language requirement, it will not count toward the thirty hours required for the degree.

MASTER OF ARTS IN EDUCATION

The Master of Arts in Education program is open to students in teacher education. This degree is offered in Human Performance and Sports Sciences. The requirements for admission to this program include the following:

1. a 3.0, "B" average, in at least twenty semester credit hours in Education on the undergraduate level.
2. removal of all undergraduate course deficiencies as determined by the student's major and minor professors.

All candidates for the Master of Arts in Education degree must complete a minimum of 33 graduate credit hours of course work, a thesis or a terminal project, and a final oral comprehensive examination. Some graduate curricula in teacher education require a 10 credit hour content area outside the department or concentration.

MASTER OF BUSINESS ADMINISTRATION

The Master of Business Administration degree program is designed for both full-time and part-time students who wish to improve their managerial abilities. Its structure blends functional business disciplines into a cohesive unit of courses which apply to decision making in business, government, and the community. Elective courses are offered in four concentrations—Accounting, Healthcare Economics & Management, Management of Information Systems and Supply Chain Management.

After satisfaction of prerequisites, requirements include a minimum of thirty-six (36) semester hours.

MASTER OF CRIMINAL JUSTICE

The Master of Criminal Justice degree is a joint program offered by Tennessee State University and Middle Tennessee State

University. Resident study at both institutions is required. The purpose of this program is to provide students and practitioners in the criminal justice system the opportunity to obtain advanced education in the area of Criminal Justice.

The requirements for the Master of Criminal Justice include a minimum of thirty-six (36) hours including enrollment in eighteen (18) hours at Middle Tennessee State University and six (6) hours of research and thesis writing. The thesis will be supervised by faculty designated at the time of admission to Candidacy.

MASTER OF EDUCATION

The Master of Education degree is open to students in education programs. This degree is offered in Administration and Supervision, Elementary Education, Special Education, Music Education, and Curriculum and Instruction.

The special requirements for the Master of Education degree include successfully completing a course in research methodology and a two-part comprehensive examination: one covering the field of professional education, the other the student's field of concentration. The comprehensive examination is taken in the last semester of enrollment.

MASTER OF ENGINEERING

The Master of Engineering degree is offered with concentrations in Biomedical, Civil, Environmental, Electrical, Mechanical, and Manufacturing Engineering. It requires a minimum of thirty-three (33) graduate credit hours of course work including three (3) semester hours of design project and a final oral examination on the project.

All students are required to take

1. at least six (6) credit hours of mathematics;
2. three (3) credit hours of laboratory based courses;
3. three (3) credit hours of special problems in Engineering application (design project);
4. fifteen (15) credit hours in the option, and
5. six (6) credit hours of electives with the consent of the advisor.

MASTER OF OCCUPATIONAL THERAPY

The Master of Occupational Therapy degree is open to students who obtain their undergraduate degree in Health Sciences from Tennessee State University as well as transfer students who have completed their undergraduate degree and the 9 prerequisite courses required. The MOT degree requires completion of 74 graduate credit hours including twelve (12) credit hours of level II fieldwork experiences. The MOT program is offered within the College of Health Sciences.

1. Completion of all course credit requirements (74)
2. Successful completion of the comprehensive examination (taken during the second spring semester)
3. Successful completion of both Level II Fieldwork experiences

MASTER OF PROFESSIONAL STUDIES

This graduate professional studies degree consists of 33 hours of interdisciplinary coursework, including completion of a professional project as the culminating experience.

MASTER OF PUBLIC ADMINISTRATION

The Master of Public Administration degree is offered by the Institute of Government. Specific requirements are

1. Completion of forty-two (42) semester hours with a minimum grade-point average of 3.0 including a supervised internship of at least twenty hours a week for fifteen weeks; or completion of thirty-six semester hours with an internship exemption;
2. Completion of eight core courses (24 semester hours); and,
3. Successful completion of a written comprehensive examination, to be taken no earlier than the term in which the student's course work is completed; or, submission and acceptance of a written thesis. Students who exercise the thesis option are instructed to follow the appropriate guidelines published by the Graduate School.

MASTER OF SCIENCE

The Master of Science degree program is available to all graduate students except those majoring in Teacher Education, English, Business Administration, Engineering, Public Administration, Criminal Justice and Nursing. Requirements for this degree include a minimum of 30 graduate credit hours taken in residence, a thesis, and a final oral examination. In lieu of the thesis, students in Guidance and Counseling may take a written comprehensive examination plus a minimum of thirty hours of course work.

This degree is offered in Agricultural Sciences; Biology; Chemistry; Computer and Information Systems Engineering; Guidance and Counseling; Psychology; Recreation; Music Education; Mathematical Sciences, and Speech and Hearing Science.

MASTER OF SCIENCE IN COMPUTER AND INFORMATION SYSTEMS ENGINEERING (CISE)

The M.S. degree in CISE is a unique degree program that integrates the areas of computer hardware, computer software and systems engineering to prepare graduates with backgrounds in development of computer integrated systems. The program requires a total of 30 semester credit hours which includes six hours of thesis and six hours of technical electives. Students seeking admissions must have a background in engineering or computer science or closely related areas. Students admitted conditionally must complete the prerequisite courses with a minimum cumulative average of 3.25 or better and do so before taking any graduate courses.

MASTER OF SCIENCE IN NURSING

The Master of Science in Nursing degree is offered with three concentrations, *Holistic Nursing*, *Family Nurse Practitioner*, and *Nursing Education*. The Master of Science in Nursing degree program is designed for both part-time and full-time students. The MSN Program provides flexible scheduling with evening and online learning options. A nurse working full-time and attending graduate school part-time may complete the program in 6 semesters. The Master of Science in Nursing Degree with a Holistic Concentration is offered as an online degree program.

The purpose of the master's degree program is to prepare nurses for advanced clinical practice and for nursing leadership positions in all types of primary health care settings. The goals of advanced practice nursing are to manage existing health problems, promote optimum health, provide resources and support to patients and their families, and to collaborate with other health professionals to coordinate care.

COMPREHENSIVE EXAMINATIONS FOR THE M.Ed., M.P.A., AND M.S. NON-THESIS DEGREES

Candidates for the Master of Education degree are required to pass comprehensive examinations covering the professional field of Education and the general field of major study, including minor courses and supportive areas.

Candidates for the M.A.Ed. and M.Ed., M.P.A. and M.S. non thesis degrees are required to take a comprehensive examination in the general field of major study and supportive fields. The examinations are designed to test the student's ability to apply principles, as well as the student's skill in demonstrating sound scholastic and composition capabilities. It is therefore, recommended that students remain current with the literature both in education and/or the field of major interest.

REGULATIONS GOVERNING THE ADMINISTRATION OF COMPREHENSIVE EVALUATIONS: M.Ed., M.P.A., M.A.Ed., and M.S. NON THESIS

1. Students must file an application with their advisors and their department heads on a form (provided by the Graduate School) and no later than the date published by the Graduate School. (Applications must be accompanied by documentation of a Program of Study approved by the Graduate School.)
2. The Dean of the Graduate School will establish the date for the examination. Candidates will be notified of the time and place two weeks before the examination is administered.
3. Examinations are administered three times during the school term: October, March, and June. It is the responsibility of the student to familiarize himself or herself with the Graduate School Calendar, which is published in the Graduate Catalog.
4. The examination shall be administered during the semester of graduation. (Exceptions must be approved by Department Head). It shall cover work prescribed by the student's program and will include at least (a. M.Ed. only; b. all degrees):
 - a. An Examination in Professional Education: Historical, Philosophical, or Social Foundations of Education, Educational Research, Curriculum, Educational Psychology; Evaluation; and Statistics. This portion of the test will be prepared by a committee from the College of Education and chaired by the Dean.
 - b. An Examination in the Student's Major Concentration: In addition to the major concentration, the examination may include an assessment of knowledge in supportive fields. A committee appointed by the Department Head would prepare this portion of the Comprehensive Examinations. It shall be scheduled for a period not to exceed three hours.

5. The Comprehensive Examinations will be written, but where very unusual circumstances require it, the examination may be oral, or written and oral, if recommended by the Advisory committee and approved by the Department Head, and the Dean of the School/College/Institute. (The Office of Disabled Student Services must approve requests for special accommodations.)
6. Grades for the examinations will be filed in the School Office and in the Graduate School Office. The Graduate School will immediately inform the students of the results upon receipt of the grades from the School/College/Institute Dean.
7. In the event that a student fails to pass the first examination, it may be recommended that the candidate be permitted to prepare for re-examination. In this event, the student and the advisor will plan a program of study, including independent study, further course work, or both. Thus, the credit hours may be extended to accommodate the recommendation of the Advisor/Department Head.
8. A second failure by a candidate will require further prescribed study before re-examination is permitted.
9. A third failure by any candidate shall result in the student's dismissal from Graduate School.
10. Candidates must present, upon arrival at the testing site, a Photo ID and a Letter of Approval (from the Graduate School) to take the Comprehensive Examination.

THESES/DISSERTATIONS SUBMISSION POLICY

The Graduate School will begin implementing mandatory electronic theses and dissertations (ETD) submission policy with students graduating in fall 2007. Paper submission of theses and optional paper dissertations submissions will end in summer 2007. Students are required to publish their ETDs through Proquest/UMI. Additional requirements and procedures governing the submission of ETDs are available at the Graduate School Website.

THESIS

Enrollment in thesis writing is permitted only after the student has been admitted to candidacy for the Master's degree. Students who write theses must consult their academic advisor in the selection of an advisory (guidance) committee and an appropriate topic for investigation. The advisory committee consists of three (3) graduate faculty members, two of whom must be graduate faculty members of the department in which the degree is sought. The third member may be a member of the graduate faculty from a closely related department. This committee shall give general supervision to the candidate's research and thesis writing. A proposal for the thesis is a formal process which involves a hearing before the advisory committee and which results in filing the appropriate proposal form with the graduate school. The proposal form must be signed by all members of the advisory committee. Master's students who write theses must adhere to the deadlines found in the Graduate School Calendar for (1) filing (or registering) the thesis with the Graduate School, (2) defending the thesis in an oral examination before the student's committee, and (3) submitting the final thesis (four copies) to the Graduate School.

The Oral Examination is two (2) hours in length and is conducted by the advisory committee and a guest examiner, a member of the Graduate Faculty from outside the student's academic department. The emphasis of the examination shall be on the thesis and general information in the candidate's field of concentration. The site of the oral examination is arranged by the Chairperson of the advisory committee.

The thesis is to be prepared in accordance with the rules and regulations set forth by the Graduate School in the current edition of Guidelines for Preparing Dissertation, Theses, Projects, and Course Papers.

A student must register for thesis hours continuously until the thesis is complete. A reduction in fees for thesis registration occurs the second time a student registers, at which time the student registers for the "Thesis Continuation" section. A break in registration will result in "I" grades for Thesis hours becoming grades of "F".

EDUCATIONAL SPECIALIST DEGREE

The Educational Specialist (Ed.S.) degree program is a planned sequence of courses, in the field of Education, offered for students who wish to pursue course work beyond the Master's degree. The Educational Specialist Degree is currently offered in area of Administration and Supervision, and School Psychology. Please see the Catalog section for the Department of Educational Administration or Department of Psychology for specific details of admission and degree requirements. The degree requires a minimum of thirty (30) hours credit beyond the Master's degree.

DOCTORAL DEGREES

DOCTOR OF EDUCATION DEGREE

The Doctor of Education (Ed.D.) degree is offered in the areas of Administration and Supervision, and Curriculum and Instruction.

DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

Doctor of Philosophy (Ph.D.) degree is offered in Biological Sciences, Computer and Information Systems Engineering, Psychology, and Public Administration. Please refer to the departmental sections of this Catalog for admission and degree requirements.

DOCTOR OF PHYSICAL THERAPY (D.P.T.)

The Doctor of Physical Therapy degree is offered by the College of Health Sciences. Specific requirements for completing this program are:

1. Completion of 115 hours including:
 - a. Ninety Two semester hours (92) of academic instruction
 - b. Twenty Three semester hours (23) of clinical education
2. Successful completion of a written comprehensive examination, to be taken no earlier than the term in which the student's course work is completed.

DISSERTATIONS

All doctoral dissertations are to be prepared in accordance with the guidelines and regulations set forth by the Graduate School in the current edition of Guidelines for Preparing Dissertations, Theses, Projects, and Course Papers.

After the first enrollment in dissertation credit, students shall continue to enroll in dissertation credit every semester until the dissertation is complete and accepted by the Graduate School. The number of dissertation hours required for the degree is stipulated in the departmental sections of this Catalog. When the student has accumulated the maximum number of dissertation credit hours allowed for a given program, the student shall register for "Dissertation Continuation" at a reduced fee. Students who fail to register each semester will be considered to have terminated their program and must reapply for admission. Registration and verification of registration are the responsibilities of the student.

CERTIFICATE PROGRAMS

A certificate program is a planned sequence of graduate-level courses that does not itself lead to a graduate degree. Certificates are currently offered through the Institute of Government, Department of Agricultural Sciences, and the School of Nursing.



COLLEGE OF ARTS AND SCIENCES

COLLEGE OF ARTS AND SCIENCES

William D. Lawson, Ph.D., Dean
 112 Hubert B. Crouch Hall (Graduate Building)
 615-963-5971
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The College of Arts and Sciences was first organized as the School of Arts and Sciences in 1951. The School was elevated to the status of College in 1987. It currently consists of eleven departments, an interdisciplinary studies program, and the University's program in elementary education. Individual academic programs in the College are accredited by the National Association of Schools of Music, the Council on Social Work Education, and the National Association of Schools of Art and Design. The chemistry professional curriculum is approved by the American Chemistry Society. All of the College's teacher education programs are accredited by the Tennessee Department of Education, and the University's entire teacher education unit is accredited by the National Council for the Accreditation of Teacher Education (NCATE). The College has 175 full-time faculty members, of whom 80 percent have doctoral degrees. There are over 2500 student majors in Arts and Sciences, approximately one hundred and thirty of whom are graduate students. On the graduate level the College has seven degree programs.

As a highly diverse College, it has a variety of objectives:

- To promote academic excellence among faculty and students;
- To conduct sound programs of research in all of the disciplines represented in the College;
- To promote the biological, physical, mathematical, and social sciences;
- To promote understanding and appreciation of the arts and humanities;
- To provide a broad program of public service related to its instructional and research responsibilities;
- To prepare qualified teachers for a culturally diverse society.

DEGREE PROGRAMS

Biological Science	Ph.D.
Biology	M.S.
Chemistry	M.S.
Criminal Justice	M.C.J.
English	M.A.
Mathematical Sciences	M.S.
Music	M.S.

In addition, the College offers limited graduate work in French, History, Geography, Political Science, Statistics, Sociology, and Spanish, although graduate degrees are not available in these disciplines.

Graduate Department	Number of Faculty	Percent with Doctorate
Biological Sciences	12	100
Chemistry	11	100
Criminal Justice	3	100
History, Geography, and Political Science	9	100
Languages, Literature, and Philosophy	15	100
Music	7	71
Physics and Mathematics	11	100
Social Work and Sociology	5	100

DEPARTMENT OF BIOLOGICAL SCIENCES

Terrance L. Johnson, Ph.D., Head
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MAJOR: BIOLOGY
DEGREE: MASTER OF SCIENCE (M.S.)
THESIS OPTION, NON-THESIS OPTION
MAJOR: BIOLOGICAL SCIENCE
DEGREE: DOCTOR OF PHILOSOPHY

Prem S. Kahlon, Ph.D., Graduate Coordinator

The Department of Biological Sciences offers graduate programs leading to the Master of Science (M.S.) degree in Biology and the Doctor of Philosophy (Ph.D.) degree in Biological Science. Both curricula are designed to prepare scholars for the pursuit of research careers in academia, government, and industry, and to improve the level of competency of high school, college, and university teachers.

The Ph.D. in Biological Science is a degree program offered by the Department of Biological Sciences in the College of Arts and Sciences and the Department of Agricultural Sciences in the School of Agriculture and Consumer Sciences. * Programs of study involve cellular and molecular biology and agribiology. The emphasis of this program is to train scientists in biological research who will be highly competent to teach in higher education and who can work in industry and with other biologists, biochemists, engineers, agricultural scientists, and others to develop solutions to problems that have an impact on our quality of life. Admissions procedures for the Ph.D. program are outlined under the Department of Biological Sciences. The major advisor will be appointed by the department offering the student's primary emphasis. Course descriptions are listed under the respective departments.

Admission Requirements: M.S. Program

Unconditional admission to the M.S. program requires the applicant to have a bachelor's degree from an accredited four-year college or university, a minimal score of 1250 calculated from the GPA multiplied by 200 and added to the GRE combined verbal and quantitative scores, two letters of recommendation and a personal statement. Also required is that the student will have accumulated a minimum of 24 acceptable semester hours in biology plus a minimum of four semester hours of biochemistry. The Departmental Admissions Committee will base admission upon these materials and additionally, will

evaluate the applicant's science course GPA and may request a personal interview to determine the applicant's potential for success in the program.

Conditional admission may be granted to applicants prior to the completion of the 24 semester hours of biology and four semester hours of biochemistry, but the student must complete these courses with a GPA of 3.0 or better. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

Degree Requirements: M.S. Program

The Department offers both thesis and non-thesis options in the master of science degree program. A minimum of 36 semester hours of approved courses is required for the M.S. degree under the thesis option, and a minimum of 39 semester hours is required under the non-thesis option. Students who choose the non-thesis option must pass a comprehensive examination (passing score 70% or above) taken no earlier than the term in which they complete their course work. Students interested in pursuing research careers in academia, government or industry are highly encouraged to take the thesis option.

Required Courses: 23 hours in thesis option, 19 hours in non-thesis option

BIOL 5010, 5020	Graduate Seminar I, II	1,1
BIOL 5100	Literature and Methods in Research	3
BIOL 5110	Research in Biology	2
BIOL 5120	Thesis Writing (required only in thesis option)	4
BIOL 5180	Cell Biology	3
CHEM 5410, 5420	Advanced Biochemistry I, II	6
AGSC 5060	Statistics for Research Workers or Equivalent	3

Elective Courses: 13 hours in thesis option, 20 hours in non-thesis option

Selection of elective courses must be made in consultation with the student's thesis committee or non-thesis advisor. Often, depending on the career direction or research interest of the student, a student may be advised to take elective courses in other departments or at other institutions. Included in the elective courses must be a physiology and a genetics course. In addition, only three (3) semester hours of Special Problems courses will be credited toward the M.S. degree.

PROGRAM OF STUDY: M.S. Program

The degree candidate must file a program of study after completing at least nine semester hours of graduate credit, but before completing fifteen hours of graduate credit. The program lists the courses which will be used to satisfy degree requirements, and details how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy: M.S. Program

When the candidate files the program of study, he or she must also apply for admission to candidacy. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy and must have a grade of B or better in all required courses.

Admission Requirements: Ph.D. Program

Applicants to the Ph.D. program must submit a completed application form, a personal statement describing interest in the program and professional goals, and three letters of recommendation from persons familiar with the applicant's academic work, especially in Biology. The Departmental admissions committee will base admission upon these materials and interviews with selected applicants.

Admission requires that the applicant have a bachelor's degree from a fully accredited four-year college or university, a minimal score of 1370 calculated from the GPA multiplied by 200 and added to the GRE combined verbal and quantitative scores and a minimum score of 600 on the GRE subject test in Biology. Students may also be admitted with subject test scores below 600, but such students must take the Departmental diagnostic examination. The admissions committee will evaluate the student's performance on the examination and design a curriculum to eliminate any identified weaknesses. After passing the recommended courses with a grade of B or better in each, the student will begin the Ph.D. curriculum.

Degree Requirements: Ph.D. Program

Degree candidates must complete the core of required graduate courses (24 hours) with a grade of B or better in each course, pass the comprehensive examination, and gain approval of their dissertation proposal prior to obtaining admission to candidacy for the doctoral degree. Students may have a "C" grade in no more than two courses (6 credit hours), neither of which can be a core course. No "D" or "F" grades are acceptable. A student who receives a grade of "C" in excess of six credits must repeat this course and achieve at least a "B". After gaining admission to candidacy the student must complete an approved curriculum (24 hours minimum of electives set by the student's research advisory committee), enroll in Graduate Seminar (BIOL 7010, 7020), complete a dissertation (24 hours), and successfully defend the dissertation prior to gaining the Ph.D. degree (Please refer to Biological Sciences Graduate Student Handbook for specific dissertation requirements). A student entering with a Master's degree may have applicable hours transferred toward the Ph.D. program, as determined by the Advisory Committee. The total number hours required is 76.

Required Courses: 24 Hours

To be completed prior to Admission to Candidacy

BIOL 5100	Literature and Methods in Research	3
BIOL 5180	Cell Biology	3
BIOL 6100	Frontiers in Molecular Science	3
BIOL 7120	Molecular Biology	3
CHEM 5410, 5420	Advanced Biochemistry I, II	6
CHEM 5600	Spectroscopic Methods in Chemistry	3
STAT 5210	Statistical Methods I	3

After Admission to Candidacy: 52 Hours

Electives		24
BIOL 5010, 5020	Graduate Seminar I, II	1, 1
BIOL 7010, 7020	Seminar in Biology I, II	1, 1
BIOL 8110	Dissertation Research	24
Total Required Hours		76

Graduate Elective Courses

BIOL 5070, 5080	Methods of Teaching Science in the College/University Setting	6
BIOL 5130	Evolution	3

BIOL 5140, 5150	Special Problems I, II	3, 3
BIOL 5160	Environmental Genetics	3
BIOL 5170	Advanced Genetics	3
BIOL 5180	Cell Biology	3
BIOL 5190	Ecology	3
BIOL 5200	General Physiology	3
BIOL 5210	Embryology	3
BIOL 5220	Advanced Parasitology	3
BIOL 5230	Arthropods and Diseases	3
BIOL 5240	Systemic Physiology	3
BIOL 5300	Plant Physiology	3
BIOL 5400	Microbial Genetics	3
BIOL 5410	Molecular Genetics	3
BIOL 5460	Immunology	3
BIOL 5470	Special Topics in Immunology	3
BIOL 6040	Individual Studies	3
BIOL 6100	Frontiers in Molecular Science	3
BIOL 6110	Individual Research	3
BIOL 6210	Introduction to Neuropharmacology	3
BIOL 6560	Techniques of Electron Microscopy	3
BIOL 7120	Molecular Biology	3
BIOL 7130	Molecular Genetics	3
BIOL 7170	Selected Topics in Molecular Genetics	3
BIOL 7180	Advanced Cell Biology	3
BIOL 7190	Advanced Molecular Biology	3
BIOL 7260	Neurobiology	3
BIOL 7270	Selected Topics in Neurobiology	3
BIOL 7410	Advanced Microbiology	3

Admission to Candidacy: Ph.D. Program

The student must apply for admission to candidacy after completing the 24-hour core of required courses (See Degree Requirements: Ph.D. program, above.) with an average of B (3.0) or better, passing the comprehensive examination, and gaining approval of the dissertation proposal. The student's advisory committee will recommend and approve a program of study which must be filed in the School of Graduate Studies upon admission to candidacy.

MINOR

The Department offers a graduate minor in Biology as a subject field for graduate students seeking advanced degrees in teaching (M.S., M.Ed., or Ed.D.). A minor consists of twelve semester hours of graduate courses approved by the advisor in the major program.

DESCRIPTION OF COURSES

BIOL 5010, 5020. GRADUATE SEMINAR I, II. (1, 1) Current problems in biology. Courses meet weekly during each semester of the regular school year. Both courses are required of all degree candidates in the Department.

BIOL 5070, 5080. METHODS OF TEACHING SCIENCE IN THE COLLEGE/UNIVERSITY SETTING. (3, 3) Teaching methods and techniques suitable for college and university level courses. Instruction in developing course outlines, lectures, and laboratory experiences, and in evaluating student progress is given. Assignment to a faculty mentor for development of teaching skills is a part of this two-semester course. Individual students work in a specific course (upper-division undergraduate or lower-division graduate) and observe classroom teaching and assist with laboratory preparations and operations. The student, under the direction of the faculty mentor, prepares and teaches at least one unit of subject matter. Prerequisite: Permission of major advisor and faculty mentor.

BIOL 5100. LITERATURE AND METHODS IN RESEARCH. (3) The methods of literature review, with primary emphasis on methods in biolog-

ical research and research laboratory rotation. The student is expected to concentrate on literature in the student's proposed area of research and rotate through three research laboratories (4 weeks each) of the student's choice. Required of all degree candidates. Formerly BIOL 5170.

BIOL 5110. RESEARCH IN BIOLOGY. (2) Individual research under the supervision of the research advisor. The student must present a general statement of proposed research and obtain the approval of the guidance committee. Prerequisite: BIOL 5100. Required of all M.S. candidates. Formerly BIOL 5160.

BIOL 5120. THESIS WRITING. (4) The preparation of a thesis over individual research under the supervision of the guidance committee. The format of the thesis must conform to that adopted by the Department of Biological Sciences. Once students have registered for this course they must continue to enroll in it every semester until they complete the thesis and are examined over it. Prerequisite: BIOL 5110. Required of all students who write a thesis.

BIOL 5130. EVOLUTION. (3) Current evolutionary theory including systematics, with an examination of macroevolutionary patterns and microevolutionary processes. Students use computer simulation techniques to construct models illustrating the concepts discussed.

BIOL 5140, 5150. SPECIAL PROBLEMS I, II. (3, 3) Short-term specialized problems in the area of major emphasis of the research investigator. The student is expected to develop and master techniques that are necessary for addressing the assigned problem. Prerequisite: permission of instructor and thesis or graduate advisor. Three laboratory periods.

BIOL 5160. ENVIRONMENTAL GENETICS. (3) The diversity of organisms, populations, and communities. Specific intricacies of the living world are elucidated. Laboratory work includes the study of organisms treated with mutagens. Chromosomal aberrations as well as phenotypic changes are observed. Students who have had at least 12 hours of Biology, including BIOL 2120, 2121 (Principles of Genetics) and BIO 5470 (Special Topics in Immunology) or the equivalents, may elect this course. Prerequisite: permission of instructor. Two lectures and one laboratory period weekly. Formerly BIOL 5100.

BIOL 5170. ADVANCED GENETICS. (3) The nature of the gene, the principles governing genic mutation and change in chromosomal structure, and the results of the operation of these principles. Prerequisite: permission of the instructor. Two lectures and one laboratory period.

BIOL 5180. CELL BIOLOGY. (3) The structure and behavior of the cell and its components with special emphasis on mitosis and meiosis. Prerequisite: permission of instructor. Two lectures and one laboratory period. Required of all degree candidates.

BIOL 5190. ECOLOGY. (3) Study of how ecological systems function and the reciprocal relationships between the structure and composition of a system and its pattern of function. Some time is devoted to an examination of that body of theory which deals with ecological models, both experimental and mathematical. Prerequisite: BIOL 4120, 4121 (Principles of Ecology) or permission of instructor. Two lectures and one laboratory period.

BIOL 5200. GENERAL PHYSIOLOGY. (3) The chemical and physical nature of protoplasm. Considered are its chemical constituents and their properties, its colloidal nature, and the bearing of this state on its physical properties and processes. Prerequisite: permission of instructor. Two lectures and one laboratory period.

BIOL 5210. EMBRYOLOGY. (3) The principles and mechanisms of developmental physiology. Prerequisite: BIOL 4210, 4211 (Embryology) or equivalent, or permission of instructor. Two lectures and one laboratory period.

BIOL 5220. ADVANCED PARASITOLOGY. (3) Life histories, taxonomy, morphology, and general importance of the parasitic protozoa and helminths to man and animals. Prerequisite: permission of the instructor. Two lectures and one laboratory period.

BIOL 5230. ARTHROPODS AND DISEASES. (3) Survey of the various orders, classes, genera, and species in the phylum arthropods that act as both ectoparasites and endoparasites in man, food animals, and domesticated animals. The course also explores the hyperparasitism in which certain genera of arthropods are parasitic to other arthropods belonging to different genera and species. Prerequisite: permission of instructor. One lecture and two laboratory periods.

BIOL 5240. SYSTEMIC PHYSIOLOGY. (3) Functions of different organ systems with emphasis on the human nervous system, muscular system, cardiovascular system, respiratory system, digestive system, urinary system, and endocrine system. Prerequisite: permission of instructor. Two lectures and one two-hour laboratory period.

BIOL 5300. PLANT PHYSIOLOGY. (3) Current topics in plant growth, development, metabolism, nutrition, and water relations. Research papers in plant metabolism and development are written and reviewed. Prerequisite: 8 hours in botany. Two lectures and one laboratory period.

BIOL 5400. MICROBIAL GENETICS. (3) The heredity of viruses, bacteria, molds, yeast, and protozoa, with emphasis on protozoan genetics. Physiologic aspects primarily relating to genetics in these forms are also considered. Prerequisites: BIOL 2120, 2121 (Principles of Genetics) and permission of instructor. In addition, BIOL 5110 is recommended.

BIOL 5410. MOLECULAR GENETICS. (3) The application and utilization of microorganisms, plants and animal systems in biotechnology. Emphasis is placed on the methods and techniques used in these systems.

BIOL 5460. IMMUNOLOGY. (3) Topics concerning all aspects of antigen-antibody reactions. Emphasis is placed on laboratory problems and procedures associated with immunology. Prerequisites: BIO 3400, 3401 (Introduction to Microbial Physiology), 4400, 4401 (Pathogenic Microorganisms), and 4410, 4411 (Immunology and Serology), or permission of instructor. Two lectures and one laboratory period.

BIOL 5470. SPECIAL TOPICS IN IMMUNOLOGY. (3) The study of a variety of sub-disciplines, including host-parasite-environment relations. Recent topics in immunology are presented by students and staff members. Prerequisite: permission of instructor. Two lectures and one laboratory.

BIOL 6040. INDIVIDUAL STUDIES. (3-9) Doctoral individual study under the guidance of the graduate curriculum advisory committee which cannot be credited toward graduate degree programs of the Department of Biology. May be repeated as topics vary. Maximum hours nine (9) with three (3) registrations.

BIOL 6100. FRONTIERS IN MOLECULAR SCIENCE. (3) Survey of current research topics in cellular, developmental, and molecular biology. The use of molecular techniques to study cell structure and function is emphasized. Required of all Ph.D. candidates.

BIOL 6110. INDIVIDUAL RESEARCH. (3-6) Doctoral research of independent nature. May be repeated twice for credit up to six (6) hours. Prerequisite: Candidacy admission to the Ph.D. Program.

BIOL 6210. INTRODUCTION TO NEUROPHARMACOLOGY. (3) Course derived from three areas of pharmacology: 1) general principles, 2) pharmacology of drugs affecting cell growth, and 3) central nervous system pharmacology.

BIOL 6560. TECHNIQUES OF ELECTRON MICROSCOPY. (3) Introduction to electron optics and types of electron microscopes. Techniques of tissue preparation, fixation, embedment, ultramicrotomy, staining, and EM photography are included. Prerequisite: Permission of instructor.

BIOL 7010, 7020. SEMINAR IN BIOLOGY I, II. (1, 1) Topics relevant to biology, biotechnology, and environmental science presented by faculty, visiting scholars and graduate students. Participating graduate students who have achieved candidacy status present one seminar per year. Both courses are required of all Ph.D. candidates in Biological Sciences. Candidates must register for 7010 and 7020 in their first two semesters of residency, unless they have not completed BIOL 5010 and 5020 or the equivalent, in which case they must register for these courses. Each course may be repeated once for an additional hour of credit. BIOL 5010 and 5020 are prerequisites to 7010, and 7010 is a prerequisite to 7020.

BIOL 7120. MOLECULAR BIOLOGY. (3) A detailed introduction to prokaryotic and eukaryotic molecular biology. Most of the course focuses on the fundamentals of molecular genetics: the structure and function of the gene, genetic organization of chromosomes, the genetic code, the molecular mechanisms of transcription, RNA processing, translation, DNA replication and recombination, and the molecular mechanisms of transcription, RNA processing, translation, DNA replication and recombination, and the molecular mechanisms of regulation of gene expression and enzyme activity. The model systems studied include both prokaryotes (bacteria and bacterial viruses) and simple eukaryotes (yeast, slime molds, and animal viruses). Prerequisites: CHEM 5410, 5420. Required of all Ph.D. candidates.

BIOL 7130. MOLECULAR GENETICS. (3) An examination of the structure and function of gene systems in prokaryotes, eukaryotes and viruses. This course also explores the process of RNA editing and other regulatory circuits, including DNA repair, control of transcription, translation and post-translation events. Prerequisites: CHEM 5410, 5420.

BIOL 7170. SELECTED TOPICS IN MOLECULAR GENETICS. (3-6) Current research interest in the areas of molecular genetics. May be repeated for credit as topics vary for no more than six (6) hours. Prerequisites: Consent of Doctoral Advisory Committee.

BIOL 7180. ADVANCED CELL BIOLOGY. (3) Molecular biology of animal cells with emphasis on assembly of cellular organelles, function and organization of membrane systems receptors, energy mechanisms, and secretion. Properties and functions of microfilaments and microtubules, Golgi apparatus, mitochondria, ribosomes, and the nucleus are considered also. Prerequisites: BIO 5180, CHEM 5410, 5420, or permission of instructor.

BIOL 7190. ADVANCED MOLECULAR BIOLOGY. (3) A review of prokaryotic and eukaryotic molecular biology literature. Discussions involve defining the mechanisms and methods used to solve biological problems. Prerequisite: BIOL 7120.

BIOL 7260. NEUROBIOLOGY. (3) Principles and mechanisms of the nervous system in invertebrate and vertebrate organisms. Topics including neurotransmitters, effector control, integration, inhibition, and localized excitation are considered. A study of the ionic and electrical mechanisms involved in the generation and conduction of nerve impulses is also included. Prerequisite: permission of instructor.

BIOL 7270. SELECTED TOPICS IN NEUROBIOLOGY. (3-6) Current research interest in the field of neurobiology. May be repeated for credit as topics vary for no more than six (6) hours. Prerequisites: Consent of Doctoral Advisory Committee.

BIOL 7410. SELECTED TOPICS IN MICROBIOLOGY. (3-6) Current research interests in the various fields of microbiology. May be repeated for credit as topics vary for no more than six (6) hours. Prerequisite: Consent of Doctoral Advisory Committee.

BIOL 8110. DISSERTATION RESEARCH. (1-9) Individual research under the supervision of the advisor. The candidate must have an approved dissertation proposal. A minimum of three registrations is required with a maximum of nine hours per registration. Dissertation hours must total at least 24. Prerequisites: admission to candidacy and permission of advisor. Required of all Ph.D. candidates.

GRADUATE FACULTY

Carolyn Alexander-Caudle, Associate Professor
B.A., 1967, Fisk University; M.A., 1970, Indiana University;
M.S., 1979, Meharry Medical College; Ph.D., 1988,
Meharry Medical College

Mary Ann Asson-Batres, Associate Professor
B.S., 1970, University of Portland; M.A.T., 1971, University
of Chicago; M.S., 1982, University of Oregon; Ph.D., 1990,
Oregon Health Sciences University

M. Ann Blackshear, Associate Professor
B.S., 1967, Knoxville College; Ph.D., 1979, Meharry
Medical College

Anthony Ejiofor, Associate Professor
B.S., 1976, Ph.D., 1983 University of Nigeria Nsukka

Philip F. Ganter, Associate Professor
B.S., 1973, Glassboro State College; Ph.D., 1981,
University of North Carolina, Chapel Hill

Michael Ivy, Associate Professor
B.A., 1978, University of Southern Illinois; Ph.D., 1986,
University of Illinois

Terrance L. Johnson, Professor and Department Head
B.S., 1974, M.S., 1976, East Texas State University; Ph.D.,
1985, University of North Texas

Prem S. Kahlon, Professor and Graduate Coordinator
B.S., 1956, Punjab University (India); M.S., 1962, Ph.D.,
1964, Louisiana State University

E. Lewis Myles, Professor
B.S., 1974, M.S., 1976, Tennessee State University; Ph.D., 1985, University of Arizona

Robert F. Newkirk, Professor
B.S., 1963, Livingstone College; M.S., 1968, Virginia State College; Ph.D., 1972, Colorado State University

John T. Robinson, Assistant Professor
B.S., 1985, North Carolina Central University; Ph.D., 1993, University of North Carolina at Chapel Hill

Benny Washington, Jr., Associate Professor
B.S., 1975, M.S., 1979, Tennessee State University; Ph.D., 1985, Atlanta University

DEPARTMENT OF CHEMISTRY

Mohammad R. Karim, Ph.D., Head
201 Chemistry Building
615-963-5321
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MAJOR: CHEMISTRY

DEGREE: MASTER OF SCIENCE (M.S.)

The Department of Chemistry offers the Master of Science (M.S.) degree in Chemistry. The objectives of the program include: 1) advancing, interpreting, disseminating, and preserving knowledge of chemistry; 2) engaging in research and publication of new scientific knowledge; 3) educating graduate students to take their proper place in industry, education, and public life. The M.S. degree represents from one to two academic years of full-time study beyond an acceptable bachelor's degree. The candidate must complete a program of study approved by his or her major professor, the Department Head, and the Dean of the Graduate School.

Admission Requirements

Unconditional admission to the M.S. program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application.

Conditional admission may be gained with a lower grade point average than 2.5, but the GRE score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935; if the GPA is between 2.0 and 2.24, the GRE score must be 1,000.

The student must remove the conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

In addition, the applicant must have an undergraduate major in Chemistry, or the equivalent. In some instances, conditional admission may be granted prior to completion of the undergraduate course requirements, but a student must complete these courses before taking any graduate courses.

Degree Requirements

The Department offers both thesis and non-thesis options in the Master of Science degree program. A minimum of 30 semester hours of approved courses is required for the M.S. degree under the thesis option, and a minimum of 36 semester hours is required under the non-thesis option. Students who choose the non-thesis option must pass a comprehensive examination (passing score 70% or above) taken no earlier than the term in which they complete their course work. Students interested in pursuing research careers in the academia, government or industries are highly encouraged to take the thesis option.

Students are required to take at least one three-hour course each in inorganic, organic, physical and analytical chemistry. There is no foreign language reading requirement for the M.S. degree in Chemistry.

The M.S. (Thesis option) degree requires students to complete and defend a thesis based upon his or her research.

1. Required Courses -	21 (Thesis Option)/ 14 (Non-thesis Option)
CHEM 5000	Advanced Inorganic Chemistry I 3
*CHEM 5110	Research (Required in Thesis Option) 5
*CHEM 5120	Thesis Writing (Required in Thesis Option) 2
CHEM 5210	Advanced Organic Chemistry I 3
CHEM 5310	Advanced Physical Chemistry I 3
CHEM 5510	Advanced Analytical Chemistry 3
CHEM 6005, 6006	Seminar I, II 1, 1

2. Electives -	9 (Thesis Option)/ 22 (Non-thesis Option)
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All students must take elective hours totaling 9 for the thesis option and 22 for the non-thesis option. Selection of elective courses should be in consultation with the student's thesis committee or non-thesis advisor. Often, depending on the career direction or research interest of the student, a student may be advised to take elective courses in other departments or at other institutions.

CHEM 5010	Advanced Inorganic Chemistry II 3
CHEM 5220	Advanced Organic Chemistry II 3
CHEM 5320	Advanced Physical Chemistry II 3
CHEM 5360	Chemical Kinetics 3
CHEM 5410, 5420	Advanced Biochemistry I, II 3,3
CHEM 5600	Spectroscopic Methods in Chemistry 3
CHEM 6405	Special Topics in Analytical Chemistry 3
CHEM 6406	Special Topics in Biochemistry 3
CHEM 6407	Special Topics in Inorganic Chemistry 3
CHEM 6408	Special Topics in Organic Chemistry 3
CHEM 6409	Special Topics in Physical Chemistry 3

(Other Electives: 5000- or 6000-level courses in Biology, Mathematics, Physics, or Engineering)

*Thesis Option

Program of Study

The degree candidate must file a program of study after completing at least nine semester hours of graduate study but no more than fifteen hours. The program of study lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy

The individual must file for admission to candidacy at the same time he or she submits the program of study. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

DESCRIPTION OF COURSES

CHEM 5000. ADVANCED INORGANIC CHEMISTRY I. (3) Topics include atomic and molecular structure, bonding theories, molecular symmetry; and group theory, chemistry of transition metals and organometallic complexes, and catalysis. Prerequisites: CHEM 3220 (Physical Chemistry II) and CHEM4200, 4201 (Inorganic Chemistry I). Required of all degree candidates. Offered only in fall.

CHEM 5010. ADVANCED INORGANIC CHEMISTRY II. (3) Spectroscopic characterization of inorganic and organometallic compounds, and reaction mechanisms of inorganic, organometallic, and bioinorganic compounds. Prerequisite: CHEM 4210 (Inorganic Chemistry II) or CHEM 5000. Offered only in spring.

CHEM 5110. RESEARCH. (1-9) A variable-credit course in methods of research and reporting in the field of chemistry. Only five hours is applicable toward degree requirements. Required of all degree candidates. Offered every semester.)

CHEM 5120. THESIS WRITING. (2) Research and writing under the supervision of the thesis director. Once students have registered for this class, they must re-enroll in it every semester until they complete the thesis. Required of all degree candidates. Offered every semester.

CHEM 5210. ADVANCED ORGANIC CHEMISTRY I. (3) A critical study of the structural theory of organic chemistry and advanced discussion of reaction mechanism. Prerequisites: CHEM 2020, 2021 (Organic Chemistry II [formerly CHEM 212, 212L]) and CHEM 3220, 3221 (Physical Chemistry II). Required of all degree candidates. Offered only in fall.

CHEM 5220. ADVANCED ORGANIC CHEMISTRY II. (3) Synthesis of natural products. Prerequisite: CHEM 5210, or permission of instructor. Offered only in spring.

CHEM 5310. ADVANCED PHYSICAL CHEMISTRY I. (3) A broad discussion of the laws of thermodynamics, quantum mechanics, spectroscopy, and classical transport processes, as well as an introduction to statistical mechanics. Prerequisites: CHEM 3220, 3221 (Physical Chemistry II). Required of all degree candidates. Offered only in spring.

CHEM 5320. ADVANCED PHYSICAL CHEMISTRY II. (3) A focus on quantum mechanics as it applies to chemistry, including molecular orbital theory and the relationship of quantum mechanics to molecular spectroscopy. Prerequisite: CHEM 5310, or permission of the instructor. Offered only in the fall.

CHEM 5360. CHEMICAL KINETICS. (3) Experimental and theoretical considerations of chemical reaction rates and mechanisms. Prerequisite: CHEM 5310. Offered on demand.

CHEM 5410. ADVANCED BIOCHEMISTRY I. (3) An in-depth study of the chemical and physical properties and biological functions of proteins, carbohydrates, lipids, and nucleic acids. Prerequisites: CHEM 3420, 3421 (General Biochemistry II), or permission of instructor. Offered only in fall.

CHEM 5420. ADVANCED BIOCHEMISTRY II. (3) An in-depth study of the catabolic pathways, including their chemical reactions, energetics, and regulation. Prerequisite: CHEM 5410, or permission of the instructor. Offered only in spring.

CHEM 5510. ADVANCED ANALYTICAL CHEMISTRY. (3) A critical study of recent developments in chemical and instrumental methods of analysis. Prerequisite: CHEM 3220, 3221 (Physical Chemistry II). Required of all degree candidates. Offered only in spring.

CHEM 5600. SPECTROSCOPIC METHODS IN CHEMISTRY. (3) Various spectroscopic methods in chemistry, concentrating on the practical aspect of using spectroscopic techniques to solve structural problems. Techniques include ultraviolet spectroscopy, infrared spectroscopy, nuclear magnetic resonance (NMR) spectroscopy, including "two dimensional" (2D) NMR in solving problems, mass spectroscopy (MS), and x-ray crystallography. Prerequisites: CHEM 2020, 2021 (Organic Chemistry II) or equivalent. Offered in fall.

CHEM 6005, 6006. SEMINAR I, II. (1, 1) Review and discussion of important current literature in the various areas of chemistry. Both courses required of all degree candidates. CHEM 6005 offered in fall and 6006 in spring.

CHEM 6405, 6406, 6407, 6408, 6409. SPECIAL TOPICS IN ANALYTICAL CHEMISTRY, BIOCHEMISTRY, INORGANIC CHEMISTRY, ORGANIC CHEMISTRY, AND PHYSICAL CHEMISTRY. (3, 3, 3, 3, 3) Faculty-generated lecture courses on selected topics of current interest or student need. Offered on demand.

GRADUATE FACULTY

- Mohammad Al-Masum, Assistant Professor
B.S., 1984, M.S., 1986, Dhaka University (Bangladesh);
Ph.D., 1996, Tohoku University (Japan).
- William Y. Boadi, Associate Professor
B.S., 1982, University of Science and Technology (Ghana);
M.S., 1988, D.Sc., 1991, Technion-IIT (Israel)
- Theodore J. Duello, Assistant Professor
B.S., 1996, Quincy College; Ph.D., 1971, St. Louis
University (Missouri).
- Sujata Guha, Assistant Professor
B.S., 1994, M.S., 1997, Purdue University; Ph.D., 2000,
Purdue University (Indiana)
- Mohammad R. Karim, Professor and Head
B.S., 1978, M.S., 1980, Jahangirnagar University
(Bangladesh); Ph.D., 1989, Kent State University (Ohio).
- John Mensah, Assistant Professor
B.S., 1987, M.S., 1995, University of Oslo (Norway); Ph.D.,
2000, university of Houston (Texas).
- Joshua Moore, Assistant Professor
B.S., 1998, University of Pittsburgh at Johnstown; Ph.D.,
2003, Vanderbilt University (Tennessee)
- Cosmas O. Okoro, Associate Professor
B.S., 1981, M.S., 1986, North Carolina Central University;
Ph.D., 1993, Howard University (D.C.)
- Nsoki Phambu, Assistant Professor
B.S., 1989, M.S., 1992, Université Henri Poincaré, Nancy I
(France); Ph.D., 1996, Université Henri Poincaré, Nancy I
(France)
- Koen P. Vercruyse, Assistant Professor
B.S., 1990, Ph.D., 1995, University of Ghent (Belgium)
- Margaret M. Whalen, Associate Professor
B.S., 1979, South Dakota School of Mines and
Technology; Ph.D., 1984, University of New Mexico School
of Medicine (New Mexico).

DEPARTMENT OF CRIMINAL JUSTICE

Deborah Burris-Kitchen, Ph.D.,
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MAJOR: CRIMINAL JUSTICE
DEGREE: MASTER OF CRIMINAL JUSTICE
(M.C.J.) Offered as a joint degree
with the Department of Criminal
Justice, Middle Tennessee State
University.

The Master of Criminal Justice degree is a joint program offered by Tennessee State University and Middle Tennessee State University. Resident study at both institutions is required. The purpose of this program is to provide students and practitioners in the criminal justice system the opportunity to obtain advanced education in the area of Criminal Justice.

The Requirements for the Master of Criminal Justice include a minimum of thirty-six (36) hours including enrollment in eighteen (18) hours at Middle Tennessee State University and six (6) hours of research and thesis writing. The thesis will be supervised by faculty designated at the time of admission to Candidacy.

The purpose of the M.C.J. program is to provide students and practitioners in the criminal justice system, especially those in the state of Tennessee, the opportunity to obtain advanced education in the area of Criminal Justice. In order to make the best use of the present faculties and content areas at Tennessee State University and MTSU, this program is offered jointly. Eighteen hours of course work must be taken at each institution.

Admission Requirements

Unconditional admission to the M.C.J. program requires the student to have a bachelor's degree from an accredited four-year college or university, an undergraduate grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 600 on the verbal and quantitative portions of the Graduate Record Examination (GRE), or at least 370 on the Miller Analogies Test (MAT). Students with less than a 2.5 undergraduate GPA must submit test scores at the time of application; students with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. In addition, the individual must have a minimum of eighteen hours of work at the undergraduate level in Criminal Justice or an approved equivalent.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 645 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 690 or the MAT score 394. Conditional admission may also be granted to a student with a limited number of deficiencies in undergraduate course prerequisites; these course deficiencies

must be removed before enrollment in Criminal Justice courses at the graduate level. The student must remove conditional status by earning at least a B (3.0 average) in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

Degree Requirements

The total program consists of thirty-six semester hours of course work. Six hours of core courses must be taken at each institution; six more semester hours of research and thesis (CRMJ 6640 and 6900) must be taken at one institution, which must be designated at the time of admission to candidacy.

1. Required Courses (12 Hours)

Six hours of core courses taken at each institution

Six hours taken at one institution to be designated at the time of admission to candidacy

CRMJ 6640	Thesis	3
CRMJ 6900	Research in Criminal Justice	3

2. Distribution of Courses

(Required Courses Included) 36 Hours

MIDDLE TENNESSEE STATE UNIVERSITY

CRMJ 6000	Criminal Justice Administration	3
CRMJ 6010	Seminar in Law	3
Additional Courses		<u>12</u>
		18

TENNESSEE STATE UNIVERSITY

CRMJ 6020	Judicial Seminar	3
CRMJ 6030	Contemporary Corrections	3
Additional Courses		<u>12</u>
		18

CRMJ 6000 and CRMJ 6010 are offered exclusively at MTSU. CRMJ 6020 and CRMJ 6030 are offered only at TSU. All courses are offered in the evenings, Monday through Thursday, meeting one night per week.

Program of Study

The degree candidate must file a program of study after completing at least nine semester hours of graduate study but no more than fifteen hours. The program of study lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy

The individual must file for admission to candidacy at the same time he or she submits the program of study. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

DESCRIPTION OF COURSES

CRMJ 5900. INDEPENDENT READINGS. (3) A course designed for the advanced student who is capable of independent study. The student is allowed to do readings in depth in a particular area of criminal justice relevant to his/her individual interest.

CRMJ 6020. JUDICIAL SEMINAR. (3) An analysis of the judicial segment of the criminal justice system, including jurisdiction, authority and power, quality of judges, and structure of court systems. Required of all degree candidates. Must be taken on TSU campus.

CRMJ 6030. CONTEMPORARY CORRECTIONS. (3) An overall analysis of contemporary corrections philosophy and programs in contemporary institutions, as well as community-based programs, their problems and prospects. Required of all degree candidates. Must be taken on TSU campus.

CRMJ 6040. THE CONCEPT OF JUSTICE. (3) A study of the historical and philosophical development of law and justice, with emphasis on contemporary application to the criminal justice process.

CRMJ 6230. POLICE MANAGEMENT SYSTEM. (3) An analysis of the administrative behavior and organizational problems of change in police management, as well as public reaction.

CRMJ 6250. CRIMINAL JUSTICE INTERNSHIP. (3) An intensive field experience in a criminal justice agency. The selection of the placement agency is determined by the student's advisor.

CRMJ 6300. INNOVATIONS IN LAW ENFORCEMENT. (3) A review of recent and current developments and practices in law enforcement management, with emphasis on the experimental and "pilot project" approaches. Course includes intensive comparison of traditional vs. non-traditional models. (MTSU only)

CRMJ 6410. ADVANCED CONSTITUTIONAL LAW. (3) A review of pre-trial rights such as arrest, search and seizure, bail, speedy trial, and right to counsel. Emphasis on Constitutional U.S. Supreme Court cases.)

CRMJ 6430. CRIMINAL LAW: THE DEFENSE SIDE. (3) A study of how a criminal case is handled by criminal defense attorneys from arrest through appeal; ethical problems arising for defense attorneys; plea bargaining.

CRMJ 6500. INTERVIEWING AND COUNSELING JUVENILES. (3) Methods and techniques of interviewing and counseling with juvenile and youthful offenders, with emphasis on the initial interview. Topics include protection of legal rights in the interview setting, an overview of environmental and behavioral considerations, and implications of interviewing and counseling in the juvenile justice process.

CRMJ 6640. THESIS. (3) Research for and composition of an acceptable thesis. Once students have enrolled in this course, they must continue to enroll in it until they complete the thesis and are examined over it. Required of all degree candidates. Prerequisite: CRMJ 6900.

CRMJ 6700. COMMUNITY-BASED CORRECTIONS. (3) The probation and parole division of the adult and juvenile sections of the corrections components of the criminal justice system, as well as the development of community institutions. Specific laws and procedures of the divisions, as well as treatment methods of each, are explored.

CRMJ 6830. VIOLENCE AND VICTIMOLOGY. (3) A survey of the rights of defendants involved with the criminal justice process. Topics include the rights of defendants to fair and reasonable treatment within the criminal justice system and in corrections, and the new ideas developing around the right to treatment and the right of society to exist without violence. The impact of violence on victims and potential victims is also examined.

CRMJ 6900. RESEARCH IN CRIMINAL JUSTICE. (3) Intensive study of basic and advanced research methods and strategies as applied to the criminal justice system. Required of all degree candidates. Prerequisite to CRMJ 6640.

CRMJ 6920. SEMINAR IN CRIMINAL JUSTICE PLANNING AND MANAGEMENT. (3) The planning process in criminal justice, including implications for management at various levels, and federal funding sources for particular purposes.

CRMJ 6930. COMPARATIVE SYSTEMS IN CRIMINAL JUSTICE. (3) Police, courts, and corrections studied comparatively among American and several foreign systems. A cross-cultural analysis of innovative programs is made to foster conclusions about philosophically interrelated systems. Penal treatment as a measure of cultural maturity is discussed both as an end in itself and as a basis for comparison.

CRMJ 6940. CRIMES, CRIMINALS, AND THEIR TREATMENT. (3) Crime typology, theories of criminal behavior, and methods of treatment. Emphasis is on institutional treatment programs.

CRMJ 6950. BUSINESS AND INDUSTRIAL SECURITY. (3) Survey of the problems of business and industrial security, the economic impact on society, the responsibilities of the criminal justice system, effectiveness of traditional criminal justice agencies, and programs of prevention, including the training of management and security personnel.

GRADUATE FACULTY

Deborah J. Burris-Kitchen, Associate Professor
B.A., 1988, Indiana University; M.A., 1990, Ball State University; Ph.D., 1995, Western Michigan University

George Kakoti, Assistant Professor
B.A., 1995, University of dare Salaam Tanzania; M.A., 1988 Indiana University LL. M, Wiana University 2001, Ph.D., Indiana University 2004.

Larry D. Woods, Professor
B.A., 1966, Emory University; J.D., 1969, Northwestern University School of Law

DEPARTMENT OF HISTORY, GEOGRAPHY, AND POLITICAL SCIENCE

Joel H. Dark, Ph.D., Head
216 Hubert B. Crouch Hall
(Graduate Building)
615-963-5471
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The Department of History, Geography, and Political Science offers graduate courses in all three of its disciplines. Although the University does not offer a graduate degree in any of its disciplines, students may earn a History concentration under the M.Ed. degree in Curriculum and Instruction. (See the M.Ed. requirements in the College of Education.) The purpose of this program is to develop teachers of history and the social sciences.

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject (History) portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or the MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 4.9, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application.

For unconditional admission, an applicant must have at least the equivalent of an undergraduate minor in History, which is a minimum of eighteen semester hours. In some instances, conditional admission may be granted prior to completion of the undergraduate course requirements, but a student must complete these courses before taking any graduate courses.

Degree Requirements

To receive the M.Ed. in Curriculum and Instruction with a concentration in History, the student must complete 33 semes-

ter hours, including 15 hours in the Education core, and 18 hours of History. Students in this program will be assigned an advisor in the Department of History, Geography, and Political Science, in addition to his or her principal advisor in the College of Education.

Required Courses: 15 hours

EDCI 5110	Research and Statistics in Education	3
EDCI 5260	Philosophy of Education	3
EDCI 5300	Multicultural Education	3
PSYC 5430	Advanced Educational Psychology	3
EDCI 6100	Curriculum Planning and Programming in Public Schools	3

History, Geography, and Political Science Courses:

18 hours of electives in History

A degree candidate must be certified to teach before the degree is awarded.

Program of Study

The degree candidate must file a program of study after completing at least nine semester hours of graduate study but no more than fifteen hours. The program of study lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department of History, the Department of Teaching and Learning, and the Graduate School.

Admission to Candidacy

The individual must file for admission to candidacy at the same time he or she submits the program of study. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

Post-Master's Training

Graduate courses at the 6000 level are offered for in-service teachers and for persons enrolled or planning to enroll in doctoral programs.

DESCRIPTION OF COURSES

HISTORY (HIST)

HIST 5010, 5020. SEMINAR IN AMERICAN HISTORY I, II. (3, 3) An intense study of selected problems in the history of the United States from 1607 to the present.

HIST 5110. HISTORICAL METHODS. (3) The principles and techniques of research in the study of history, including problems in the preparation of a manuscript.

HIST 5150. TEACHING AMERICAN HISTORY I. (3) A workshop to enhance the teaching of early American history. Using selected topics in American history through the end of the Civil War, the course explores the instructional use of primary sources, questions of historical interpretation, the importance of local history and material culture, and the use of online history resources.

HIST 5240. HISTORY OF FEMINISM. (3) An exploration of historical developments and variations in feminist thought. Through the critical analysis of historical and literary texts, the course examines ideas about gender and sexuality, their intersections with concepts of race, class, and nation, and their changing role in constructions of identity. Prerequisite: HIST 3500 or WMST 2000.

HIST 5160. TEACHING AMERICAN HISTORY II. (3) A workshop to enhance the teaching of American history since 1865. Using selected topics in American history since the end of the Civil War, the course explores the instructional use of primary resources, questions of historical interpretation, the importance of local history and material culture, and the use of online history resources.

HIST 5310, 5320. RECENT UNITED STATES HISTORY I, II. (3, 3) The study of contemporary problems in historical literature through an analysis of American historians and their writings.

HIST 5410, 5420. SEMINAR IN EUROPEAN HISTORY I, II. (3, 3) A study of Europe in the nineteenth century with emphasis on the cultural developments of Western Europe.

HIST 5710, 5720. SEMINAR IN AFRICAN HISTORY I, II. (3, 3) The intensive study of selected social, economic, political, and international relationships of the nations of Africa. First course covers the origin of mankind to the beginnings of European colonization. The second course continues through the present, focussing on the emergence of independent states in the postcolonial period.

HIST 5750. VITAL TOPICS. (3) Selected subjects on a specific period-local, regional, national, or international in scope. In recent semesters HIST 5750 covered the history of Germany from 1918 to 1945.

HIST 6510, 6520. SEMINAR IN LATIN-AMERICAN HISTORY I, II. (3, 3) An examination of the colonization, nation-building, and development of Latin America. The first course explores the region to 1900. The second examines Latin America since 1900.

HIST 6710. MODERN AFRICA: POLITICAL AND SOCIAL HISTORY. (3) An investigation of Africa's political and economic development since 1939.

HIST 6870. AFRO-AMERICAN ISSUES, 1775 TO 1876. (3) An examination of the role and contributions of African-Americans to the total American scene. Constitutional, economic, and sociocultural issues are examined through the revisionist approach and the use of new ideas included in recent publications.

HIST 6880. AFRICAN-AMERICAN ISSUES, 1877 TO PRESENT. (3) Key issues of African-Americans in relation to the majority. Topics include revisionist historical examination of the black soldiers of the Civil War and Reconstruction, black state and national political leaders, the African-American business and industrial workers, black institutions, African-Americans in World Wars I and II, the period of agitation 1920-1954, the socio-economic and political impact of the Brown vs. Topeka case, black revolutionaries of the 1960's, and the aspirations of the present.

GEOGRAPHY (GEOG)

GEOG 5010. PROBLEMS IN TEACHING GEOGRAPHY. (3) Attention to problem areas in geography. Topics include aims and objectives of the study of geography, proper utilization of instructional aids, and the construction of teaching units.

GEOG 5030. EARTH SCIENCE FOR TEACHERS. (3) A general introduction to the geosciences designed especially for middle and high school teachers. Course emphasizes the basic concepts and latest developments in geology, ocean studies, weather, and astronomy. Teaching aids, supplementary readings, and laboratory techniques to promote effective teaching of earth science courses are included.

GEOG 5040. WORLD GEOGRAPHY FOR TEACHERS. (3) A general survey of the geographic regions of the world, designed especially for secondary school teachers. Emphasis is placed on cultures, resources, and physical features, including the oceans. Course includes aids to promote effective teaching of geography courses.

GEOG 5050. EUROPE: PHYSICAL AND CULTURAL LANDSCAPES. (3) An introduction to the physical and cultural aspects of Europe west of Russia, designed especially for geography, social science, and history teachers. Recent European developments of world importance are emphasized. Course includes aids to promote effective teaching of European geography and history.

GEOG 5750. DIRECTED READING IN GEOGRAPHY. (3) Designated topics focusing on specialized areas of investigation, allowing students to learn of recent developments in the discipline and participate in intensive research.

POLITICAL SCIENCE (POLI)

POLI 5010. AMERICAN GOVERNMENT AND POLITICS. (3) An in-depth analysis of the American political system-national, state, and local-for those with no undergraduate background in political science.

POLI 5130. RESEARCH METHODS. (3) An introduction to the research methods of political science, including data collection, survey research, data analysis, and statistical analysis.

POLI 5350. SEMINAR IN LEGISLATIVE PROCESS. (3) The structure and methods of transacting business in the American Congress and state legislatures: the role of legislatures in the American political system.

POLI 5600. SEMINAR IN COMPARATIVE POLITICAL SYSTEMS. (3) Major political systems of the world today-constitutions, structures, sources of power and legitimacy, political cultures, and methods of resolving conflicts.

GRADUATE FACULTY

Michael T. Bertrand, Assistant Professor

B.A., 1985, University of Louisiana at Lafayette; M.A., 1988, University of Louisiana at Lafayette; Ph.D., 1995, University of Memphis

Sheri B. Browne, Assistant Professor

B.A., 1986, Lewis and Clark College; Ph.D., 2002, University of Minnesota

Theron E. Corse, Assistant Professor

B.A., 1988, University of Georgia at Athens; M.A., 1992, Vanderbilt University; Ph.D., 1995, Vanderbilt University

Elizabeth Dachowski, Associate Professor

B.A., 1984, Indiana University; M.A., 1987, University of Minnesota; Ph.D., 1995, University of Minnesota

Joel H. Dark, Associate Professor

B.A., 1990, Middle Tennessee State University; M.A., 1991, Vanderbilt University; Ph.D. 1998, Vanderbilt University

Bobby L. Lovett, Professor

B.A., 1967, Arkansas A.M. and N. College; M.A., 1969, Ph.D., 1978, University of Arkansas

John P. Miglietta, Associate Professor

B.A., 1984, Fordham University; M.A., 1987, New York University; Ph.D., 1995, New York University

Adebayo Oyebade, Associate Professor

B.A., 1981, University of Ife (Nigeria); M.A., 1985, University of Ife (Nigeria); Ph.D., 1995, Temple University

Erik E. Schmeller, Associate Professor

B.S., 1991, Fort Hays State University; M.A., 1993, Southern Illinois University at Carbondale; Ph.D., 1999, Southern Illinois University at Carbondale

DEPARTMENT OF LANGUAGES, LITERATURE, AND PHILOSOPHY

Warren Westcott, Ph.D., Head
104 Humanities Building
615-963-5641
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MAJOR: ENGLISH
DEGREE: MASTER OF ARTS (M.A.)

Clark Maddux, Ph.D., Graduate Coordinator

Graduate work in English is designed to give the student a rich background in English and American literature, including literature by black authors, and in the nature and principles of the growth of the English language. It also provides a thorough grounding in the methods of research. Every effort is made, in the scheduling of classes, to meet the needs of those students who teach or are engaged in other occupations in the immediate area.

The Department offers several paths to the degree to meet the varying needs and interests of its students. Some of these alternatives are appropriate for students for whom the M.A. will be the final degree, and some are appropriate for students who plan to work on a doctorate. In addition, candidates for the M.A. may take a minor in a field related to their own.

Admission Requirements

Unconditional admission to the M.A. program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

In addition, the student must have completed at least 24 hours of English at the undergraduate level, 12 of which must be at the junior or senior level. In some instances, conditional admission may be granted prior to completion of these undergraduate course requirements, but a student must complete these courses before taking any graduate courses.

Degree Requirements

1. Course Requirements

English majors are required to take thirty hours of course work, at least twenty-one of which must be within the Department. English 5110 is the only course required of all majors.

A. Required Course

ENGL 5110	Bibliography and Methods	2
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B. Electives: 21 to 28 hours with the consent of the advisor.

ENGL 5020	Independent Study	1-3
ENGL 5030	Graduate Academic Writing	3
ENGL 5050	Composition and Computers in Literary Studies	3
ENGL 5080	Critical Papers	1
ENGL 5090	Linguistics and the English Language	3
ENGL 5100	History of the English Language	3
ENGL 5120	Thesis Writing	4
ENGL 5130, 5140, 5150	Teaching English to Speakers of Another Language	3, 3, 3
ENGL 5200	Chaucer	3
ENGL 5210	Literature of the Middle Ages	3
ENGL 5220	English Drama and Dramatic Criticism, 1660-1784	3
ENGL 5230	Studies in European Drama	3
ENGL 5300	Studies in English Renaissance Literature	3
ENGL 5310, 5320	Studies in Shakespeare	3,3
ENGL 5330	Studies in the Age of Reason	3
ENGL 5340	Studies in the Age of Sensibility	3
ENGL 5410	Studies in English Romanticism	3
ENGL 5420	Studies in the Victorian Age	3
ENGL 5610	Studies in American Literature, 1600-1800	3
ENGL 5620	Studies in American Literature, 1800-1900	3
ENGL 5630	Studies in American Literature, 1900-Present	3
ENGL 5650	Studies in Black American Literature, Beginnings to 1940	3
ENGL 5660	Studies in Black American Literature, 1940 to Present	3
ENGL 5700	The Modern Novel	3
ENGL 5900	Literary Criticism	3
ENGL 6000	Special Topics in Literature I, II	3,3
ENGL 6010	Creative Writing	3
ENGL 6020	Project Writing	2
ENGL 6130	Research in English Education	3
ENGL 6150	Teaching Literature in a Diverse Society	3
ENGL 6160	Teaching Adolescent Literature	3
ENGL 6510	Studies in Twentieth-Century Poetry	3
ENGL 6520	Studies in Twentieth-Century Prose	3
ENGL 6620	Studies in American Literary Thought	3
ENGL 6650	Seminar in the Harlem Renaissance	3
ENGL 6800	Major African Writers	3
ENGL 6900	Apprenticeship in Teaching College English	3

Note: Twelve hours of 6000-level English courses may be chosen as electives by doctoral students majoring in Curriculum with the concentration, Curriculum Planning. This Ed.D.

program is offered through the Department of Teaching and Learning in the College of Education.

2. Language Requirement

The language requirement may be satisfied in any of the following ways:

1. Passing a written examination in French, Spanish, or German, administered by the faculty in Foreign Languages;
2. Completing two years, with a minimum grade of C, of a single foreign language in undergraduate school;
3. Passing ENGL 5050, ENGL 5090, or ENGL 5100. The three hours earned do not count toward the minimum of thirty hours required for the degree if the student applies one of these courses toward the language requirement.

3. Final Writing Project

The Department offers three choices for the final writing project. The appropriate course must be taken for each option. See course descriptions.

1. A thesis, requiring ENGL 5120 (4 hours)
2. A project in the teaching of English language or literature, requiring ENGL 6020 (2 hours)
3. Three critical papers, requiring ENGL 5080 (1 hour)

Program of Study

The degree candidate must file a program of study after completing at least nine semester hours of graduate study but no more than fifteen hours. The program of study lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy

The individual must file for admission to candidacy at the same time he or she submits the program of study. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

Other Work Beyond the Master's Degree

Public school teachers in Tennessee may rise to a higher salary level by completing thirty hours of course work beyond the master's degree. The Department participates in the program and offers work appropriate to this purpose.

FOREIGN LANGUAGES

Foreign Languages does not offer a graduate degree. It does, however, offer occasional graduate courses to meet the needs of those who desire to become better trained teachers, to prepare for advanced degrees, or to satisfy degree requirements for other programs in the University. The curricula in French, Spanish, and Modern Foreign Languages are to be found under the course descriptions.

DESCRIPTION OF COURSES

ENGLISH (ENGL)

ENGL 5020. INDEPENDENT STUDY. (1-3) Individual study and research under faculty guidance, resulting in a substantial piece of writing. This course may be taken only in addition to the writing requirements for the M.A. degree: i.e., the research and writing cannot be used to satisfy the requirements of three master's papers, the education project, or the thesis. Prerequisite: permission of the Department Head or graduate coordinator. May be repeated once by permission for a maximum of three hours.

ENGL 5030. GRADUATE ACADEMIC WRITING. (3) A course designed for all graduate students and intended to advance students' understanding of expectations and conventions of graduate writing and research. Course content emphasizes content and structure of journal articles, abstracts, prospecti, theses and dissertations, conventions and styles of academic discourse, paraphrasing to avoid plagiarism, and rules of APA, MLA, and CMS citation. Prerequisite: admission to a graduate program and completion of relevant research and methods course (if required by individual department) or by special permission of the instructor.

ENGL 5050. COMPOSITION AND COMPUTERS IN LITERARY STUDIES. (3) A course designed to improve the teaching of composition at all levels and to incorporate the fundamentals of electronic communication, including word processing, electronic mail, and electronic filing. Course includes fundamentals of computer-assisted instruction and a survey of research capabilities of computers in literature and language. Course may be used to satisfy the language requirement in English, in which case it does not provide hours toward the degree.

ENGL 5080. CRITICAL PAPERS. (1) Preparation of three scholarly papers as a final writing project for the master's degree. Each paper is written under the direction of a graduate English professor under whom the student has studied; the paper must be approved by a committee of graduate faculty from the Department. Required of all students who elect the paper option.

ENGL 5090. LINGUISTICS AND THE ENGLISH LANGUAGE. (3) A course designed to help students achieve a degree of linguistic consciousness conducive to developing an objective view of their native tongue, of language generally, and of language learning. Course may be used to satisfy the language requirement in English, in which case it does not provide hours toward the degree.

ENGL 5100. HISTORY OF THE ENGLISH LANGUAGE. (3) A study of the phonetic, grammatical, and lexical components of English, with emphasis on the development of American dialects. Course may be used to satisfy the language requirement in English, in which case it does not provide hours toward the degree.

ENGL 5110. BIBLIOGRAPHY AND METHOD. (2) A course in methods and materials for the study of English language and literature. Required of all M.A. candidates in English.

ENGL 5120. THESIS WRITING. (4) Research and writing under the supervision of thesis director. Required of all students who write a thesis. Once students have registered for this course, they must re-enroll in it every semester until they complete the thesis and are examined over it.

ENGL 5130, 5140, 5150. TEACHING ENGLISH TO SPEAKERS OF ANOTHER LANGUAGE. (3, 3, 3) The study and application of the principles of modern linguistic science and recent research in the teaching of English to speakers of another language.

ENGL 5200. CHAUCER. (3) Study in the works of Geoffrey Chaucer, with the emphasis on the Canterbury Tales. Course also includes attention to the medieval cultural background.

ENGL 5210. LITERATURE OF THE MIDDLE AGES. (3) Studies in the prose and poetry of the Middle Ages, including selections from major works of the Old and Middle English periods, exclusive of Chaucer.

ENGL 5220. ENGLISH DRAMA AND DRAMATIC CRITICISM, 1660 TO 1784. (3) The study of dramatic literature from the reopening of the theatres in 1660 through the eighteenth century, with a concentration on the Restoration comedy of manners.

ENGL 5230. STUDIES IN EUROPEAN DRAMA. (3) The study of major playwrights of the last two centuries, emphasizing the drama of social criticism, symbolistic drama, and the experimental drama.

ENGL 5300. STUDIES IN ENGLISH RENAISSANCE LITERATURE. (3) A study of the major poets and prose writers from 1603 to 1660: the Cavaliers, the Metaphysicals, Bacon, Burton, Browne, Hobbes, the character writers, and the biographers.

ENGL 5310, 5320. STUDIES IN SHAKESPEARE. (3,3) Problems in major dramatic works, with attention to the comedies and tragedies.

ENGL 5330. STUDIES IN THE AGE OF REASON. (3) A survey of British literature of the early eighteenth century, including figures such as Swift, Dryden, Pope, Defoe, and Richardson.

ENGL 5340. STUDIES IN THE AGE OF SENSIBILITY. (3) Survey of English literature from 1745 to 1798, including both British and American figures such as Fielding, Johnson, Franklin, Boswell, Sheridan, Goldsmith, and Blake, as well as schools such as the graveyard poets and Gothic revivalists. The course may also consider continental literary influences such as Rousseau, Diderot, and Voltaire.

ENGL 5410. STUDIES IN ENGLISH ROMANTICISM. (3) An examination of the major poets and prose writers.

ENGL 5420. STUDIES IN THE VICTORIAN AGE. (3) A study of writers of nonfictional prose, poets, and novelists, from the accession of Queen Victoria until 1900.

ENGL 5610. STUDIES IN AMERICAN LITERATURE, 1600-1800. (3) An examination of writers from the first English settlements to the establishment of national independence. Emphasis is on the Puritan mind, culminating in the writing of Jonathan Edwards, on the mind of the Enlightenment, culminating in the writers of the American Revolution, and on the rise of an imaginative literature.

ENGL 5620. STUDIES IN AMERICAN LITERATURE, 1800 TO 1900. (3) A consideration of special themes or topics covering a limited number of writers rather than a survey of the entire period.

ENGL 5630. STUDIES IN AMERICAN LITERATURE, 1900 TO PRESENT. (3) A consideration of special themes or topics covering a limited number of writers rather than a survey of the entire period.

ENGL 5650. STUDIES IN BLACK AMERICAN LITERATURE, BEGINNINGS TO 1940. (3) A review of literature written by black Americans, from inception to World War II. Such writers as Chesnutt, Dunbar, Johnson, Hughes, McKay, Cullen, Toomer, Larsen, Hurston, Brown, and Wright are studied.

ENGL 5660. STUDIES IN BLACK AMERICAN LITERATURE, 1940 TO PRESENT. (3) A chronological study of black writers since the beginning of World War II. Such writers as Ellison, Baldwin, Baraka, Brown, Angelou, and Morrison are considered.

ENGL 5700. THE MODERN NOVEL. (3) A tracing of the development of the novel in English through its various historical periods and modes. The course deals with representative texts from several periods to illustrate the changes in the form.

ENGL. 5900. LITERARY CRITICISM. (3) A course which follows the development of criticism of literature, beginning with Aristotle and other classical texts and continuing to the present day.

ENGL 6000. SPECIAL TOPICS IN LITERATURE. (3-6) Study of a specific period, author(s), or topic chosen in response to the needs of students in the program. The course may be repeated once for a maximum of six semester hours combined.

ENGL 6010. CREATIVE WRITING. (3) A course in the writing of various forms of literature-fiction, drama, poetry-as well as the reading and analysis of literature by established masters of the genres.

ENGL 6020. PROJECT WRITING. (2) The devising and development of a project in the teaching of English language or literature, under the supervision of an individual faculty member. Required of all students who do a project. Once students have registered for this course, they must re-enroll in it every semester until they complete the project and are examined over it.

ENGL 6130. RESEARCH IN ENGLISH EDUCATION. (3) An investigation of current research in the teaching of composition, language, and literature.

ENGL 6150. TEACHING LITERATURE IN A DIVERSE SOCIETY. (3) A study of literatures of various groups represented in the elementary, middle, and senior high school curriculum.

ENGL 6160. TEACHING ADOLESCENT LITERATURE. (3) An introduction to literature which addresses the concerns and problems of young adults, as seen from their point of view. Techniques for teaching such literature constitute part of the course.

ENGL 6510. STUDIES IN TWENTIETH-CENTURY POETRY. (3) A study of twentieth-century poets, variously selected each term.

ENGL 6520. STUDIES IN TWENTIETH-CENTURY PROSE. (3) A study of twentieth-century novelists, essayists, and/or dramatists, variously selected each term.

ENGL 6620. STUDIES IN AMERICAN LITERARY THOUGHT. (3) A consideration of the intellectual, social, political, economic, and historical trends which have strongly influenced literary and popular thought. The class may focus on a limited period of time, such as the Civil War, the 1920s, or the Depression, or it may trace the historical development of characteristic concerns and attitudes over a longer period of time. Course may include texts from various artistic and intellectual disciplines (history, religion, social criticism, philosophy, the visual arts) and such figures as Darwin, Marx, Freud, and Frazier.

ENGL 6650. SEMINAR IN THE HARLEM RENAISSANCE. (3) Study and analysis of the historical forces that gave rise to a literary movement known as the Harlem Renaissance.

ENGL 6800. MAJOR AFRICAN WRITERS. (3) A study in depth of selected African writers, with an analysis of their major themes as these relate to the emergence of modern Africa. Writers vary from one semester to another.

ENGL 6900. APPRENTICESHIP IN TEACHING COLLEGE ENGLISH. (3) A course designed to allow graduate students to assist a college English instructor in the teaching of a freshman composition course. The instructor guides the student in the preparation of lessons, techniques of evaluation, and conferring with students. The professor in charge of this course holds weekly sessions in which concerns are addressed, advice and assistance are given, and discussions of pedagogical issues are conducted.

FRENCH (FREN)

FREN 5010. ORAL FRENCH. (3) Conversational drill using practical and technical vocabulary, with emphasis on the acquisition of communicative competence.

FREN 5100. PHONETICS AND DICTION. (3) The theory of French sounds and their phonetic transcription. Course includes practice in spoken French, rhythm, articulation, intonation, and voice in prose and verse.

FREN 5210. ADVANCED COMPOSITION AND CONVERSATION. (3) Intensive drill in French conversation on contemporary topics, accompanied by discussions and exercises on syntax and composition.

MODERN FOREIGN LANGUAGES (MFLA)

MFLA 5200. THE TEACHING OF FOREIGN LANGUAGES. (3) Current issues, trends, theories, and practices in teaching foreign languages.

MFLA 6500. METHODS INSTITUTE. (4) An intensive program for foreign language teachers. Topics include examination of traditional methods, with emphasis on the learning of new, practicable techniques for teaching French and Spanish. Course also demonstrates the use of a variety of materials and equipment.

SPANISH (SPAN)

SPAN 5010. ORAL SPANISH. (3) Conversational drill using practical and technical vocabulary, with emphasis on the acquisition of communicative competence.

SPAN 5100. PHONETICS AND DICTION. (3) Nuances in the Spanish sound system, phonetic transcription, and drill in prose and verse intonation.

SPAN 5210. ADVANCED COMPOSITION AND CONVERSATION. (3) Modern idiomatic usage through exercises in grammar and oral and written composition.

GRADUATE FACULTY

Rebecca Dixon, Assistant Professor
B.A., 1992, Oberlin College; M.A., 1996, Ph.D., 2000, Temple University

M. Wendy Hennequin, Assistant Professor
B.A., 1989, Ma, 1992, Central Connecticut State University; Ph.D., 2006, University of Connecticut

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B.A., 1960, Bennett College; M.A., 1967, Scarritt College; M.A., 1968, Colorado State University; D.A., 1978, Middle Tennessee State University

Melissa Hull, Assistant Professor
B.A., 1997, University of North Carolina-Chapel Hill; Ma, 2000, Ph.D., 2005, Vanderbilt University

Jocelyn Adkins Irby, Associate Professor
B.A., 1969, Bennett College; M.S., 1971, Fort Valley College; M.A., 1990, Tennessee State University; Ph.D., 1996, Southern Illinois University

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B.A., 1970, Tennessee State University; M.A., 1971, University of Illinois; Ph.D., 1990, University of Tennessee

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B.A., 1974, Earlham College; M.A., 1979, Tennessee State University, M.B.A., 1983, Columbia University; Ph.D., 1999, University of Missouri

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B.A., 1987, Columbus College; M.A., 1996, Ph.D., 2001, Purdue University

Samantha Morgan-Curtis, Assistant Professor and Coordinator of Freshman Composition
B.A., 1991, M.A., 1993, Ph.D., 2002, University of Tennessee

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B.A., 1989, Vassar College; M.F.A., 1992, Arizona State University; M.A., 1993, Ph.D., 1996, Vanderbilt University

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B.S., 1976, Universidad Industrial de Santander (Colombia); M.A., 1979, Illinois State University; Ph.D., 1990, University of Illinois

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B.S. Ed., 1971, university of Delaware; M.Ed., 1975, northeastern University; Ph.D., 1994, Texas Tech University

Guillermo Valencia-Serna, Associate Professor
Licenciado en Ciencias de la Educacion, 1976, Universidad Pedagogica Nacional (Columbia); Doctor en Filosofia y Letras, 1978, Pontificia Universidad Javeriana (Colombia); Ph.D., 1990, University of Florida

Warren Westcott, Professor and Head of Department
B.A., 1969, College of Charleston; M.A., 1974, Ph.D., 1980, University of South Carolina

DEPARTMENT OF MUSIC

Robert L. Elliott, D. M. A., Head
104 Performing Arts Building
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MAJOR: MUSIC EDUCATION
DEGREE: MASTER OF SCIENCE (M.S.)

Graduate study in music education is open to applicants who have satisfactorily completed a bachelor's degree in music or music education and who meet all other requirements for admission to the Teacher Education program and to the Graduate School. The purpose of the graduate program is to impart knowledge and explore methods and research related to teaching instrumental and vocal music in K-12 schools.

Admission Requirements

Unconditional admission to the M.S. program requires the student to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a score of at least 370 on the Miller Analogies Test (MAT).

Conditional admission may be gained with a lower grade point average, but the MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the MAT score must be at least 383. If the GPA is between 2.0 and 2.24, the MAT score must be at least 394. Students with an undergraduate GPA of less than 2.5 must submit the MAT score at the time of application; students with a GPA of 2.5 or above may submit the test score in the first semester of attendance, but it is preferable that they submit the score at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

The bachelor's degree earned by an applicant must be substantially the same in content and experience as the undergraduate curriculum in Music at Tennessee State University. Any differences may be construed as undergraduate deficiencies which must be made up before taking any graduate courses.

Degree Requirements

The Master of Science degree requires thirty-one (31) semester hours of graduate course work, including MUSC 5120 Thesis Writing or MUSC 6020 Project Writing. The degree also requires a comprehensive written examination and a final oral examination: covering Music Theory, Music History, Conducting, and the major performance area.

The non-thesis/project option is available to candidates for the Master of Science degree in Music Education. It requires thirty-three (33) hours as prescribed below, and a written comprehensive examination covering Music Theory, Music History, Music Education, and Music Literature.

1. Required Courses

A. Professional Education Core: 12 hours

EDAD 5020	Philosophy of and Introduction to School Administration	3
EDAD 5030	Supervision and Improvement of Instruction	3
EDAD 5110	Research and Statistics in Education	3
EDAD 5260	Philosophy of Education	3

B. Core Courses in Music: 11 or 13 hours

MUSC 5000	Introduction to Graduate Study	3
MUSC 5120	Thesis Writing	4
or		
MUSC 6020	Project Writing	2
MUSC 5250	Seminar in Music Education	3
MUSC 5320	Theory Review	3

2. Electives in Music and/or Music Education:

5 to 6 hours
with permission of advisor

Group I: Music Education (one course)

MUSC 5510, 5515, or 5516	Applied Music*	2
MUSC 5010	Advanced Vocal Methods	3
MUSC 5060	Psychology of School Music Teaching	3
MUSC 5100	Instrumental Methods and Materials	3
MUSC 5240	Band Pageantry	3
MUSC 5270	Supervision of School Music	3

Group II: Music Theory (one course)

MUSC 5280	Physics of Music	3
MUSC 5340	Harmonic Counterpoint	3
MUSC 5520	Special Topics	3

Group III: Musicology (one course)

MUSC 5070	The Symphony	3
MUSC 5080	The Opera	3
MUSC 5090	Twentieth-Century Music	3

*Required of Project Writers

Non-Thesis/Project Option

1. Required Courses

A. Professional Education Core: 12 hours

EDAD 5020	Philosophy of and Introduction to School Administration	3
EDAD 5030	Supervision and Improvement of Instruction	3
EDAD 5110	Research and Statistics in Education	3
EDAD 5260	Philosophy of Education	3

B. Core Courses in Music: 9 hours

MUSC 5000	Introduction to Graduate Study	3
MUSC 5250	Seminar in Music Education	3
MUSC 5320	Theory Review	3

2. Electives in Music and/or Music Education: 6 hours with permission of advisor

Group I: Music Education (two courses)

MUSC 5010	Advanced Vocal Methods	3
MUSC 5060	Psychology of School Music Teaching	3
MUSC 5100	Instrumental Methods and Materials	3
MUSC 5240	Band Pageantry	3
MUSC 5270	Supervision of School Music	3

Group II: Music Theory (one course)

MUSC 5280	Physics of Music	3
MUSC 5340	Harmonic Counterpoint	3
MUSC 5520	Special Topics	3

Group III: Musicology (one course)

MUSC 5070	The Symphony	3
MUSC 5080	The Opera	3
MUSC 5090	Twentieth-Century Music	3

Program of Study

The degree candidate must file a program of study after completing at least nine but no more than fifteen semester hours of graduate study. The program of study lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy

The individual must file for admission to candidacy at the same time he or she submits the program of study. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

DESCRIPTION OF COURSES

MUSC 5510. APPLIED MUSIC. (2) Graduate study covering standard literature, technical proficiency, and performance trends on one's instrument or in voice. MUSC 5515 is Fifth-Year Piano and MUSC 5516 is Fifth-Year Voice. Prerequisite: audition.

MUSC 5000. INTRODUCTION TO GRADUATE STUDY IN MUSIC EDUCATION. (3) A concentrated survey of bibliographical material, current periodical literature, library-internet resources, and research techniques applicable to graduate study in music education. Required of all degree candidates.

MUSC 5010. ADVANCED VOCAL METHODS. (3) A detailed study of vocal problems found in public schools: methods, materials, and problems of organization. Other topics include psychological and physiological problems in the teaching of voice production: diagnosis, breath control, resonance, diction, repertory, and interpretation.

MUSC 5060. THE PSYCHOLOGY OF SCHOOL MUSIC TEACHING. (3) The relationship of psychological research to practical applications in music education. Topics include the relationship of the learning process to music education, the relationship of the learning process to music learning, executive factors in music education, evaluation, tests, and measurements.

MUSC 5070. THE SYMPHONY. (3) An historical background of the growth and development of the modern symphony orchestra, along with a critical study of symphonic literature.

MUSC 5080. THE OPERA. (3) A study of operas illustrating the basic types, including history and analysis of operatic literature. Recorded music and actual singing of scores illustrate the discussion.

MUSC 5090. TWENTIETH-CENTURY MUSIC. (3) A survey of modern music. Selected composers of the period are discussed, and stylistic and formalistic analysis of representative work is required.

MUSC 5100. INSTRUMENTAL METHODS AND MATERIALS. (3) A detailed study of instrumental problems met in public schools: methods, materials, and problems of organization. Discussion of financing, instrument testing, storage and repair, rehearsal techniques, and other problems relating to the work of the instrumental director.

MUSC 5120. THESIS WRITING. (4) The writing and oral defense of a thesis. The adequate set-up of the problem, the collection of data, the use of data, and the conclusions to be reached are emphasized. Required of all degree candidates, unless Department Head approves a project in individual cases. Once students enroll in this course, they must continue to enroll in it until they complete the thesis and are examined over it.

MUSC 5240. BAND PAGEANTRY. (3) An intensive study of problems unique to the marching band: rudimentary techniques for the drum major; problems of cadence, alignment, and formations; and selecting and scoring music for maneuvers and stunts.

MUSC 5250. SEMINAR IN MUSIC EDUCATION. (3) A survey of research studies and an evaluation of current methods in music education. Topics include criteria for selecting materials and classroom procedure, as well as review and criticism of philosophies and curricula in music education. Required of all degree candidates.

MUSC 5270. SUPERVISION OF SCHOOL MUSIC. (3) An analysis and evaluation of principles, practices, and trends in the organization, administration, and supervision of music education in public school systems.

MUSC 5320. THEORY REVIEW. (3) Comprehensive review of common practice theory. Analysis of representative compositions of major historical periods and of all major forms and related techniques and styles. Required of all degree candidates.

MUSC 5340. HARMONIC COUNTERPOINT. (3) An intensive study of the works of the Baroque Era employing contrapuntal techniques.

MUSC 5520, 5525, 5526, 5527. SPECIAL TOPICS. (3) Individual research on subjects agreed upon by student and professor. Course may be substituted for required courses upon recommendation of Department Head. Written document required.

MUSC 6020. PROJECT WRITING. (2) Action research on a school or classroom problem. A scholarly document, which may be descriptive or experimental, is required. The project may also take the form of a public performance, but a written document is still required. Prerequisite: permission of Department Head.

GRADUATE FACULTY

Robert L. Elliott, Associate Professor and Department Head
B.A., 1980, University of New Orleans; M.M.E., 1992, Loyola University—New Orleans; D.M.A., 2003, University of Memphis

Edward L. Graves, Associate Professor
B.S., 1962, Tennessee State University; M.S., 1965, University of Illinois

Reginald McDonald, Associate Professor
B.M.E., 1991, Alabama State University; M.M.Ed., 1997, State University of West Georgia; Ed.S., 2002, Clark Atlanta University

Darryl G. Nettles, Associate Professor
B.F.A., 1983, State University of New York at Buffalo; M.M., 1987, D.M.A., 1995, University of Illinois

Christine M. Perkey, Associate Professor
B.M., 1974, Augusta College; M.M., 1975, University of South Carolina; D.M.A., 1981, Southern Baptist Theological Seminary

Patricia Reeves, Associate Professor
B.M., 1987, Jackson State University; M.S., 1995 Florida International University; Ph.D., 2002, Florida State University

Richard Todd, instructor
B.M., 1990, University of Cincinnati; M.A., 1993, Southern Methodist University

DEPARTMENT OF PHYSICS AND MATHEMATICS

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MAJOR: MATHEMATICAL SCIENCES
DEGREE: MASTER OF SCIENCE (M.S.)

Kothandaraman Ganesan, Ph.D., Graduate Coordinator

The Department of Physics and Mathematics offers the Master of Science degree in the Mathematical Sciences with areas of emphasis in mathematics (M) and mathematics for teachers (MT). The purpose of these programs is to educate students in the mathematical knowledge and techniques increasingly important for a technological society and to prepare teachers capable of passing this knowledge on to others. The master's degree represents from one to two academic years of full-time study beyond an acceptable bachelor's degree. The specific plan of study must be filed with the Graduate Mathematics Curriculum Committee (GMCC) in the first semester of graduate enrollment.

Admission Requirements

Each applicant for admission must meet all entrance requirements of the Graduate School and be recommended by the GMCC of the Department. In admitting students, this committee considers the undergraduate cumulative grade point average, the grade point average in the Mathematics courses, references (at least two letters from mathematicians), and the scores on the General Test (verbal + quantitative) of the Graduate Record Examination. The minimal requirements for unconditional admission include a bachelor's degree from an accredited four-year college or university with a Mathematics major or the equivalent. In addition, the applicant must have the following:

1. a 2.6 cumulative GPA, or a 3.0 GPA in the major courses on a 4.0 system; and
2. a score of 900 calculated from the formula (125 GPA + score on the quantitative portion of the GRE General Test).

Applicants may receive conditional admission if they fall short of these criteria, if the GMCC believes there are compensating factors, such as very high recommendations or promising scores on the verbal and analytical sections of the GRE General Test. Students must remove the conditional status by earning at least a B (3.0) average on the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

Degree Requirements

In addition to successfully completing thirty-seven semester hours of course work, each degree candidate must pass:

1. a general examination in computer proficiency,
2. a written comprehensive examination on the core requirements for the candidate's area of emphasis, and
3. an oral defense of the thesis.

1. Mathematics for Teachers (MT)

The degree program with the area of emphasis mathematics for teachers (MT) requires thirty-seven semester hours of course work: twenty-eight hours of required courses, including four hours of thesis-writing, and three electives chosen with the permission of the advisor.

A computer science component is available in the MT area of emphasis for the student having sufficient background in mathematics and/or computer science, the specific plan of study to be worked out jointly by the student and the GMCC.

Required Courses for MT Emphasis: 28 hours

MATH 5010	Introduction to Number Theory	3
MATH 5020	Abstract Algebra	3
MATH 5050	Intermediate Analysis	3
MATH 5060, 5070	Linear Algebra I, II	3,3
MATH 5080	Geometry	3
MATH 5090, 5100	Advanced Calculus I, II	3,3
MATH 5120	Thesis	4

Electives: 9 hours, with permission of the advisor

MATH 5730, 5740	Logic I, II	3,3
MATH 5750	History of Mathematics	3

Other electives: All 5000- and 6000-level mathematics courses (except MATH 5710); graduate courses in statistics, physics, and engineering, with the permission of the GMCC.

A student may strengthen his or her program by making appropriate substitutions of more rigorous courses with the permission of the GMCC.

2. Mathematics (M)

The degree program with area of emphasis in mathematics (M) requires thirty-seven semester hours of course work; twenty-two hours of required courses, including four of thesis writing, and fifteen hours of suggested electives chosen with the permission of the advisor. MATH 5010, 5020, 5050, 5060, 5080, 5090, 5100, 5710 and STAT 5010, 5020, and 5070 do not count in the Master of Science in the Mathematical Sciences program with the mathematics (M) emphasis.

Required Courses for M Emphasis: 22 hours

MATH 5120	Thesis	4
MATH 5310	Topology I	3
MATH 5510	Real Analysis I	3
MATH 5530	Complex Analysis I	3
MATH 5640	Modern Algebra I	3

At least two of the following courses:

MATH 5320	Topology II	3
MATH 5520	Real Analysis II	3
MATH 5540	Complex Analysis II	3
MATH 5650	Modern Algebra II	3

Suggested Electives: 15 hours with permission of advisor

MATH 5560, 5570	Differential Equations I, II	3,3
MATH 5610, 5620	Linear Spaces I, II	3,3
MATH 5730, 5740	Logic I, II	3,3
MATH 5900	Special Topics	3-6
MATH 6510, 6520	Functional Analysis I, II	3,3

MATH 6640, 6650 Group Theory I, II	3,3
MATH 6670, 6680 Combinatorial Analysis I, II	3,3
STAT 5210, 5220 Statistical Methods I, II	3,3
STAT 6210 Analysis of Categorical Data	3
STAT 6220 Applied Regression Analysis and Other Multivariable Methods	3

Other electives: Graduate courses in physics, engineering, and economics, with permission of the GMCC.

A student may strengthen her or his program by making substitutions of more appropriate courses with permission of the GMCC.

Program of Study

The degree candidate must file a program of study after completing at least nine semester hours of graduate study but no more than fifteen hours. The program of study lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy

The individual must file for admission to candidacy at the same time he or she submits the program of study. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

DESCRIPTION OF COURSES

MATHEMATICS (MATH)

MATH 5010. INTRODUCTION TO NUMBER THEORY. (3) Divisibility properties for the integers, the greatest common divisor, unique factorization, congruences, diophantine equations, the Euler function, Wilson's theorem, the Chinese remainder theorem, and other elementary properties of numbers. Prerequisite: MATH 1920 (Calculus II) or permission of the GMCC. Required of all students in the mathematics for teachers (MT) emphasis. Course may not be applied to the degree with the mathematics (M) emphasis.

MATH 5020. ABSTRACT ALGEBRA. (3) An introduction to the properties of groups, rings, integral domains, and fields. Prerequisites: MATH 1920 (Calculus II) and 5010, or permission of the GMCC. Required of all students in the mathematics for teachers (MT) emphasis. Course may not be applied to the degree with the mathematics (M) emphasis.

MATH 5050. INTERMEDIATE ANALYSIS. (3) A study of the foundations of real variable calculus, including the definitions, algebra, and topology of the real numbers, limits, sequences, convergence, continuity, the intermediate value theorem, and differentiability. Prerequisite: MATH 1920 (Calculus II) or permission of the GMCC. Required of all students in the mathematics for teachers (MT) emphasis. Course may not be applied to the degree with the mathematics (M) emphasis.

MATH 5060. LINEAR ALGEBRA I. (3) Homogeneous and non-homogeneous systems, matrix algebra, determinants, vector spaces and subspaces, bases, linear transformations, and rank. Prerequisite: MATH 1920 (Calculus II) or permission of the GMCC. Required of all students in the mathematics for teachers (MT) emphasis. Course may not be applied to the degree with the mathematics (M) emphasis.

MATH 5070. LINEAR ALGEBRA II. (3) A continuation of MATH 5060. Topics include orthogonal bases, linear transformations, and similarity theory. It is strongly recommended that MATH 5060 and 5070 be taken sequentially. Prerequisite: MATH 5060 or the equivalent. Required of all students in the mathematics for teachers (MT) emphasis. Course may not be applied to the degree with the mathematics (M) emphasis.

MATH 5080. GEOMETRY. (3) Brief review of Euclidean geometry with further topics, including the non-Euclidean, projective, and fractal geometries. Prerequisite: MATH 1920 (Calculus II) or permission of the GMCC. Re-

quired of all students in the mathematics for teachers (MT) emphasis. Course may not be applied to the degree with the mathematics (M) emphasis.

MATH 5090, 5100. ADVANCED CALCULUS I, II. (3, 3) Functions of several variables, the algebra and topology of n -space, differentials, extrema, the gradient, line, surface and volume integrals, Stokes' theorem, the inverse mapping theorem, the implicit function theorem, the change-of-variable theorem, and manifolds. Prerequisites: MATH 5050 (Intermediate Analysis), 5060, and 5070, or the equivalent. Both courses required of all students in the mathematics for teachers (MT) emphasis. Courses may not be applied to the degree with the mathematics (M) emphasis.

MATH 5120. THESIS. (4) Individual in-depth research on a topic chosen in collaboration with the advisor. Required of all degree candidates. Once students have registered for this course, they must re-enroll in it every semester until they complete the thesis and are examined over it.

MATH 5310, 5320. TOPOLOGY I, II. (3, 3) First semester: homeomorphisms, connectedness, compactness, metric spaces, normal spaces, Urysohn's lemma, Tietze's theorem, separation axioms, product topology, quotient spaces. Second semester: an introduction to homotopy theory and algebraic topology. Prerequisites: MATH 3510 (Intermediate Analysis), or permission of the GMCC. MATH 5310 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 5510, 5520. REAL ANALYSIS I, II. (3, 3) Continuous functions, uniform convergence, measure and integration, Lebesgue measure and integrals, convergence theorems, L_p -spaces, Banach spaces, differentiation, Radon-Nikodym theorem, Fubini's theorem. Prerequisite: MATH 4420 (Advanced Calculus II) or permission of the GMCC. MATH 5510 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 5530, 5540. COMPLEX ANALYSIS I, II. (3, 3) Analytic functions, Cauchy's integral theorem, Taylor and Laurent series, singularities, residue theory, analytic continuation, conformal mapping, Riemann surfaces, infinite products, and entire functions. Prerequisite: MATH 4420 (Advanced Calculus II) or permission of the GMCC. MATH 5530 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 5560, 5570. DIFFERENTIAL EQUATIONS I, II. (3, 3) First- and second-order equations, general theory of linear n th-order differential equations, constant co-efficient systems, variation of parameters, infinite series, singular solutions, asymptotic solutions, Green's function, stability, special functions, and the Laplace transform. Prerequisites: MATH 3120 (Applied Mathematics), and MATH 3610 (Linear Algebra I), or permission of the GMCC.

MATH 5610, 5620. LINEAR SPACES I, II. (3, 3) Fields, vector spaces, quotient spaces, linear transformations, ring theory, similarity, equivalence and congruence of matrices, bilinear forms, tensors, and other topics. Prerequisites: MATH 3620 (Linear Algebra II) and 3640 (Abstract Algebra), or permission of the GMCC.

MATH 5640, 5650. MODERN ALGEBRA I, II. (3, 3) Equivalence relations, mappings, groups, rings, fields, polynomial rings, modules, vector spaces, and Galois theory. Prerequisites: MATH 3210 (Introduction to Number Theory), 3610 (Linear Algebra I), and 3640 (Abstract Algebra), or permission of the GMCC. MATH 5640 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 5710. TEACHING MATHEMATICS IN SECONDARY SCHOOL. (3) Lectures, discussions, and reports on materials and methods used in the instruction of mathematics at the junior and senior high school level. Prerequisite or parallel: field experience. Course may not be applied to either degree program (MT or M).

MATH 5730, 5740. LOGIC I, II. (3, 3) An introduction to mathematical logic. Logic I is a survey of the fundamental material, including the statement calculus and an informal treatment of predicate calculus. Logic II includes a formal treatment of the predicate calculus, Godel's incompleteness theorem, and undecidability. Prerequisite: MATH 2110 (Calculus III) or permission of the GMCC.

MATH 5750. HISTORY OF MATHEMATICS. (3) The origin and development of mathematical ideas, beginning with geometry and algebra and continuing through selected topics in modern mathematics. Prerequisite: MATH 2110 (Calculus III) or permission of the GMCC.

MATH 5900. SPECIAL TOPICS. (3) Special topics in mathematics, to be offered with permission of the GMCC in response to the preference and needs of the students. Repeatable to six hours.

MATH 6510, 6520. FUNCTIONAL ANALYSIS I, II. (3, 3) Topological spaces, Hahn-Banach theorem, uniform-boundedness theorem, closed-graph theorem, L_p-spaces, compact operators, Banach algebras, spectral theory of self-adjoint operators. Prerequisite: MATH 5520 or permission of the GMCC.

MATH 6640, 6650. GROUP THEORY I, II. (3, 3) Permutation groups, adelian groups, Sylow theorems, free groups, lattices, solvable groups, commutators, and group representations. Prerequisite: MATH 5650 or permission of the GMCC.

MATH 6670, 6680. COMBINATORIAL ANALYSIS I, II. (3, 3) Permutations and combinations, Ramsey's theorem, generating functions, recurrence relations, principle of inclusion and exclusion, Polya's theory of counting, graph theory, max-flow and min-cut theorem. Prerequisites: MATH 3620 (Linear Algebra II) and 3640 (Abstract Algebra), or permission of the GMCC.

PHYSICS (PHYS)

PHYS 5050, 5060. MATHEMATICAL PRINCIPLES IN PHYSICS. (3, 3) Topics to be chosen from fluid mechanics, thermodynamic, electromagnetics, and special relativity theory. Prerequisites: MATH 3120, 4420, PHYS 2120, or permission of the GMCC.

STATISTICS (STAT)

STAT 5010, 5020. PROBABILITY AND STATISTICS I, II. (3, 3) The axioms of probability, random variables and their probability distributions, multivariate probability distributions, functions of random variables, hypothesis testing, linear models and estimation, analysis of categorical data, non-parametric statistics. Prerequisites: MATH 1920 (Calculus II) and COMP 2240 (Computer Programming in C), or permission of the GMCC. Neither course may be applied to the degree with the mathematics (M) emphasis.

STAT 5070. INTRODUCTION TO STATISTICAL COMPUTING AND DATA MANAGEMENT. (3) Components of digital computers, characteristics of magnetic storage devices, use of JCL and utility programs, concepts and techniques of research data management. Prerequisites: MATH 1920 (Calculus II) and COMP 2240 (Computer Programming in C), or permission of the GMCC. Course may not be applied to the degree with the mathematics (M) emphasis.

STAT 5210. STATISTICAL METHODS I. (3) Problems of description and goodness of fit, univariate location and scale, bivariate independence and correlation, comparison of independent or matched samples involving categorical, discrete, or continuous data, and non-parametric tests. Prerequisite: STAT 5020 or permission of the GMCC.

STAT 5220. STATISTICAL METHODS II. (3) Regression analysis, analysis of variance and covariance elements of experimental design, random-effects models, simultaneous inference, the general linear model. Prerequisite: STAT 5210 or permission of the GMCC.

STAT 6210. ANALYSIS OF CATEGORICAL DATA. (3) Analysis of categorized data, applications in epidemiology (contingency tables, rates, and relative risks), analysis by means of linear models, and methods for ordinal data. Prerequisite: STAT 5220 or permission of the GMCC.

STAT 6220. APPLIED REGRESSION ANALYSIS AND OTHER MULTIVARIABLE METHODS. (3) Regression analysis with emphasis on computational aspects and practical problems, discriminant analysis, factor analysis, principal components, canonical correlation. This course includes a term project. Prerequisite: STAT 6210 or permission of the GMCC.

GRADUATE FACULTY

Arnold A. Dean, Associate Professor
B.S., 1961, Oakwood College; M.A., 1966, Andrews University; Ph.D., 1980, Vanderbilt University

Stefan, Forcey, Assistant Professor
B.S., 1997, Liberty University, VA; Ph.D., 2004, Virginia Polytechnic Institute and State University

Kothandaraman Ganesan, Associate Professor
M.S., 1978, Ph.D., 1988, University of Illinois at Chicago

Minakshisundaram Rajagopalan, Professor
M.S., 1950, Andhra University (India); Ph.D., 1963, Yale University

Michael E. Reed, Assistant Professor
B.S., 1996, M.S., 1998, Ph.D., 2004, University of Arkansas

Huaizhong Ren, Assistant Professor
B.S., 1988, Zhejiang University (China); M.S., East China Normal University; Ph.D., 2004, University of Maryland

Raymond R. Richardson, Professor
B.S., 1960, Rust College; M.S. 1963, Atlanta University; Ph.D., 1979, Vanderbilt University

Sivapragasam Sathananthan, Associate Professor
B.Sc., 1981, University of Jaffna (Sri Lanka); M.S., 1986, Marquette University; Ph.D., 1989, University of Texas, Arlington

Sandra H. Scheick, Professor and Department Head
B.A., 1958, Vassar College; M.A., 1960, Ph.D., 1966, Syracuse University

Kofi A. Semanya, Associate Professor
B.S., 1971, M.S., 1974, University of Ghana; Ph.D., 1980, University of North Carolina, Chapel Hill

George K. Yang, Associate Professor
M.A., 1985, Ph.D., 1990, University of Maryland

DEPARTMENT OF SOCIAL WORK AND SOCIOLOGY

Oscar Miller, Jr., Ph.D., Head
212 Jane E. Elliott Hall (Women's Building)
615-963-5511
FAX 615-963-5552

The Department of Social Work and Sociology does not offer a graduate degree program, but does offer a limited number of graduate courses to supplement the degree programs of other departments. The purpose of the study of Sociology is to develop understanding of human social behavior and to assist in the development of institutional agendas for dealing with contemporary social problems.

Minor

A graduate minor in Sociology consists of 12 semester hours of course work approved by the advisor in the major program.

COURSE OFFERINGS

SOCI 5000	Rural Sociology	3
SOCI 5140	Fundamentals of Sociology	3
SOCI 5150	Current Perspectives in Urban Sociology	3
SOCI 5160	Urban Community Life	3
SOCI 5180	Complex Organization	3
SOCI 5200	Educational Sociology	3
SOCI 5240	Advanced Social Psychology	3
SOCI 5280	Seminar in Cultural Anthropology	3
SOCI 5300	Social Movements	3
SOCI 5900	Selected Topics in Sociology	3
SOCI 6000	Sociology of Organizations	3
SOCI 6030	Political Sociology	3
SOCI 6060	Medical Sociology	3
SOCI 6200	Advanced Educational Sociology	3

DESCRIPTION OF COURSES

SOCI 5000. RURAL SOCIOLOGY. (3) Changes in the rural way of life, the rural community, and the rural social institutions in the United States and the world.

SOCI 5140. FUNDAMENTALS OF SOCIOLOGY. (3) The basic concepts of social structure and behavior. This course is a prerequisite for those who have not had introductory courses in Sociology.

SOCI 5150. CURRENT PERSPECTIVES IN URBAN SOCIOLOGY. (3) Current thinking and research on urban life.

SOCI 5160. URBAN COMMUNITY LIFE. (3) The mechanics and dynamics of the urban environment, including education, the family, politics, and other institutions.

SOCI 5180. COMPLEX ORGANIZATION. (3) The structure and function of formal institutions, and the sociological perspective on their potential.

SOCI 5200. EDUCATIONAL SOCIOLOGY. (3) An analysis of the forces which are at work in educational systems. Minority issues in education are a focus.

SOCI 5240. ADVANCED SOCIAL PSYCHOLOGY. (3) The systematic interpretation of the behavioral and mental processes of individuals within social contexts.

SOCI 5280. SEMINAR IN CULTURAL ANTHROPOLOGY. (3) An introduction to the systematic study of the symbolic life of cultures, with emphasis on language and the meanings derived from myths and governing ideas.

SOCI 5300. SOCIAL MOVEMENTS. (3) A study of the often dramatic ways that groups have changed the structure of their societies.

SOCI 5900. SELECTED TOPICS IN SOCIOLOGY. (3) The opportunity to pursue focused studies on areas not covered by the regular course offerings.

SOCI 6000. SOCIOLOGY OF ORGANIZATIONS. (3) A course which focuses on social characteristics which determine organizational structure and promote organizational change. The developmental approach is used.

SOCI 6030. POLITICAL SOCIOLOGY. (3) The study of the distribution of power in society, through the nominal political institutions and in the other areas of political life.

SOCI 6060. MEDICAL SOCIOLOGY. (3) The medical and healthcare establishment, and the social dynamics within and without it, as they pertain to the delivery of health services.

SOCI 6200. ADVANCED EDUCATIONAL SOCIOLOGY. (3) The second in the Departmental sequence in the study of educational institutions and issues facing them today.

GRADUATE FACULTY

Anthony J. Blasi, Professor

B.A., 1968, St. Edward's University; M.A., 1971, University of Notre Dame; M.A., 1984, University of St. Michael's College (Canada); S.T.L., 1985, Regis College (Canada); Ph.D., 1974, University of Notre Dame; Th.D., 1986, Regis College and University of Toronto;

Mahgoub E. Mahmoud, Associate Professor

B.A., 1971, University of Cairo (Egypt); H.D.S.W., 1975, University of Khartoum (Sudan); M.A., 1981, Ph.D., 1983, Brown University

Oscar Miller, Jr., Professor and Head

B.A., 1986, Murray State University; M.A., 1989, Ph.D., 1993, Vanderbilt University

Josie A. Scales, Associate Professor

B.S., 1970, Tennessee State University; M.A., 1973, Fisk University; Ph.D., 1989, Howard University

Edward K. Sanford, Associate Professor

B.A., 1979; M.A., 1981, North Carolina Central University; Ph.D., 1991, Howard University



**THE INSTITUTE OF
GOVERNMENT
PUBLIC ADMINISTRATION**

THE INSTITUTE OF GOVERNMENT

PUBLIC ADMINISTRATION

Ann-Marie Rizzo, Ph.D., Director

Office: Suite F-1 Williams Campus Phone: (615) 963-7241

GOALS

The goals of the Institute of Government are to support the University's mission by engaging in educational, research, and service programs focusing upon applied public management and policy. The Institute offers the Master of Public Administration (MPA) degree, the Master of Professional Studies degree (MPS), the Ph.D. degree in public administration, the Certificate in Non-Profit Management and the Certificate in Health Administration and Planning.

Program offerings are designed to serve individuals presently employed by government, non-profit and health agencies as well as individuals seeking to begin careers in the public service.

Note: Enrollment in Public Administration courses is limited to students admitted to the Master's, Certificate or Ph.D. programs. Non-Degree, conditional or non-major students must have approval of the Institute Director or Coordinator to enroll.

MAJOR: PUBLIC ADMINISTRATION
DEGREE: MASTER OF PUBLIC ADMINISTRATION (M.P.A.)

The MPA program prepares students for administrative positions in local, state, or national government and in non-profit and with agencies. The MPA is accredited by the National Association of Schools of Public Affairs and Administration. It requires 36 semester hours of course work plus an internship of 6 semester hours.

A modern public administrator must understand the administrative process and all factors that affect it, including vital issues which affect our society. Administrators must be able to recommend appropriate courses of action to elected officials and other public policy makers. In order to accomplish the public mission, skills and knowledge are essential in areas such as financial administration, the management of personnel, evaluation, research design, statistics, computer utilization, and the management of large organizations. Our graduates are professionals qualified by their specialized knowledge, skills and abilities to assume key managerial positions in the public sector.

Admission Process

Applicants for admission must provide the following items: (1) Application for Admission to the Graduate School; (2) application fee; (3) Graduate Record Examination scores (only the General Test is required); (4) one transcript from all colleges and universities previously attended; (5) three letters of recommendation; and (6) a Statement of Purpose explaining why the applicant seeks admission to the MPA program.

Admission Requirements

In addition to submitting the admissions application and materials cited above, applicants seeking unconditional admission must present a Graduate Record Examination score (verbal and quantitative scores combined) of at least 750. Ap-

plicants with at least a 2.50 undergraduate grade point average who have not submitted a score on the Graduate Record Examination may be conditionally admitted. Students admitted conditionally must submit an acceptable Graduate Record Examination test score and/or proof of satisfaction of prerequisite during the first semester of enrollment. Persons having a Master's or other advanced degree need not submit a GRE score.

MPA applicants must meet the following requirements: students seeking unconditional admission to the program must have a minimum overall grade point (calculated either as overall GPA or last 60 hours) of 2.25, provided the student presents a correspondingly higher GRE score. Similarly the minimum acceptable GRE score would be 750, provided the student presents a correspondingly higher GPA.

This sliding scale for unconditional admission to the MPA program is as follows.

GPA (Four Year or Last 60 Hours)	GRE (composite Verbal/ Quantitative score)	GMAT
3.0	750	325
2.9	770	335
2.7—2.8	790	345
2.5—2.6	800	350
2.25—2.49	870	385
Below 2.25	1000	450

Persons having a Master's or other advanced degree need not submit a GRE score. Students with acceptable GMAT scores (325 or better) may submit the GMAT in place of the GRE (see above table for GMAT scores equivalent to the GRE). All scores, GRE or GMAT, must have been earned within 6 years of the anticipated matriculation date.

All Applicants:

1. are required to complete PISI 2010 or an equivalent undergraduate course in American national government satisfactorily prior to admission. A graduate-level course in this subject can also be used to meet this requirement. This prerequisite should be satisfied before enrolling in graduate-level courses for credit.
2. are expected to be competent in written and oral English.
3. must possess basic computer literacy.

Advisor

Each student admitted to the MPA program is assigned an advisor. Students should consult with their advisors prior to registering for classes in each term of enrollment.

Degree Requirements

A. Thesis Options. The Institute offers both thesis and non-thesis options. Both options require completion of 42 semester credit hours including an internship of 6 semester hours. The non-thesis option requires 36 semester hours of course work exclusive of the internship. The thesis option requires 30 se-

mester hours of course work, exclusive of the internship, and a thesis of 6 semester hours.

B. Master's Core. Students must satisfy the eight-course core requirement plus any prerequisite courses. Enrollment in a specific course may be waived for students having equivalent graduate course work. Waiver of a core course requirement does not reduce the total credit hours which must be earned toward the degree.

C. Electives. Students may select, with the approval of their advisors, any four 600 level courses offered by the Institute. With the permission of the student's advisor, a maximum of 12 semester credit hours of course work may be taken outside of the Institute, including courses transferred from another institution.

D. Internship. The total credit hours for the MPA include 6 semester hours for a supervised internship of at least twenty hours a week for fifteen weeks. Students typically work for state or city agencies acquiring on the job experience in government. Students with little or no experience in public, non-profit or health administration should contact the director concerning an internship. Students may be approved for an internship after completing 15 credit hours of course work.

Students with one year of significant governmental or comparable administrative experience may be exempted from the internship requirement and have a reduction of 6 semester hours in the total credit hours required for the MPA. Qualified students seeking an internship exemption must submit an Application for Internship Exemption accompanied by a reflective essay relating their academic study to their work experience.

E. Comprehensive Examination. Students must successfully complete a written comprehensive examination, taken no earlier than the term in which all course work is completed.

Course Scheduling

Courses are scheduled with the fully employed individual in mind. Classes meet weekly on weekday evenings or bi-weekly during the day on weekends.

PROGRAM OF STUDY

Required Core Courses—24 hours

PADM 6110	Statistics for Public Administrators	3
PADM 6130	Research Methods in Public Administration	3
PADM 6150	Information Technology in the Public Sector	3
PADM 6210	Seminar in Public Administration	3
PADM 6230	Seminar in Fiscal Management: Public Budgeting*	3
PADM 6310	Seminar in Organization Theory	3
PADM 6410	Seminar in Policy Analysis	3
PADM 6490	Seminar in Politics of Administration	3
PADM 6500	Internship in the Public Service (unless student is exempted)—6 hours	

*For Non-Profit and Health students pursuing the MPA, PADM 6190 substitutes for PADM 6230.

Concentration or Elective Courses—12 hours

MAJOR: PROFESSIONAL STUDIES (RODP)

DEGREE: MASTER OF PROFESSIONAL STUDIES (MPS)

Concentration: Strategic Leadership

The MPS is an interdisciplinary graduate degree program designed for working adults who wish to pursue graduate professional studies. It is offered in cooperation with the Regents Online Degree Program (RODP). The Strategic Leadership concentration requires 33 hours of interdisciplinary coursework in the areas of leadership, communication, strategic planning and assessment, organizational structure and research/data analysis, all offered on-line. (For more information about the specific courses refer to the RODP Website at: www.tn.regents-degrees.org/home.)

Admission Requirements

To qualify for this program, students must hold a bachelor's degree. Additionally:

- International students must meet additional requirements
- Students must adhere to the admission deadlines of the Graduate School.
- Students must apply to the Graduate School and submit official transcripts. (Forms and requirements can be found on the website for the TSU School of Graduate Studies and Research at www.tnstate.edu/grad)

Unconditional Admission:

- 1) An undergraduate grade point average of at least 2.75 on a 4.0 scale from an accredited college or university.
- 2) An acceptable score on the GRE, generally at least 400 verbal, 500 quantitative and a 4.0 on analytical writing. Applicants with five or more years of professional work experience may submit a portfolio in lieu of the GRE. The admission decision will be based on the entire academic and professional record. Applicants will be granted unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program.

Conditional Admission:

Requirements for conditional admission: Applicants who do not meet the requirements for unconditional admission might be admitted conditionally if their entire academic and professional records indicate potential for success in the program. Conditions may include, but are not limited to, taking prerequisite undergraduate courses, enrolling in specified graduate-level courses, and achieving a specified grade point average.

Note: During the first semester students must complete all entrance requirements including formal transcripts and any required tests for full admission to the program.

More information on the TSU program can be found at www.tnstate.edu/LOG.

CERTIFICATE: HEALTH ADMINISTRATION AND PLANNING

The Graduate Certificate in Health Administration and Planning is a 15 credit hour program offered by the Institute of Government to serve the professional needs of individuals working in public, private and non-profit agencies concerned with health administration, planning or policy. The program assists students in conceptualizing the changing world of health care delivery and management. Community health practitioners and Institute faculty design and teach courses with a practical, applied orientation. The Certificate is offered as a stand-alone credential and as part of the MPA curriculum.

Admission Process

Applicants for the stand-alone Graduate Certificate must meet graduate school requirements for admission as a non-degree student. Applicants must provide: (1) a completed Application for Admission to the Graduate School; (2) application fee; (3) one official transcript of undergraduate work showing the award of a baccalaureate degree from an accredited college or university. Requests for application forms and materials should be directed to the Director of the Institute.

Students admitted to the Certificate program who wish to apply their Certificate credits toward completion of the MPA degree must apply for that degree and meet all MPA admission standards.

Advisor

The Institute Director or Coordinator of Graduate Studies serves as the academic advisor for all students admitted to the certificate program unless students elect other faculty. Students should consult with their advisors prior to registering for classes each term.

Certificate Requirements

To earn a 15 semester credit hour certificate, students must satisfy three required and two elective courses. The required courses are:

PADM 6110	Statistics for Public Administrators (3)
PADM 6130	Research Methods in Public Administration (3)
PADM 6550	Epidemiology (3)

Electives include:

PADM 6190	Financial Management for Health and Non-Profit Organizations (3)
PADM 6510	Management of Health Agencies (3)
PADM 6520	Health Policy in the U.S. (3)
PADM 6530	Topics in Administration of Health and Human Services Programs (3)
PADM 6540	Planning and Problem Solving in Health Services (3)

The certificate is awarded upon completion of the requisite 15 semester credit hours.

CERTIFICATE: NON-PROFIT MANAGEMENT

The Graduate Certificate in Non-Profit Management is a 15 credit hour program of the Institute of Government. It offers individuals working in non-profit organizations, or those considering a career in non-profit enterprises, an opportunity to enhance managerial, professional, analytical, and research abilities. A part-time student can complete certificate requirements within twelve months, and the program is designed to fit within an existing Master of Public Administration (MPA) degree to accommodate those students who may wish to enroll in and complete that degree program.

Admission Process

Applicants for the stand-alone certificate must meet Graduate School requirements for admission as a non-degree student. Applicants must provide: (1) a completed Application for Admission to the Graduate School; (2) application fee; (3) one official transcript of undergraduate work showing the award of a baccalaureate degree from an accredited college or university. Requests for application forms and materials should be directed to the Graduate School.

Students admitted to the certificate program who wish to apply their certificate credits toward completion of the MPA degree must apply for that degree and meet all MPA admission requirements.

Advisor

The Institute Director or Coordinator of Graduate Studies serves as the academic advisor for all students admitted to the certificate program unless students elect other faculty. Students should consult with their advisors prior to registering for class each term.

Certificate Requirements

To earn a 15 semester credit hour certificate, students must satisfy these course requirements:

PADM 6190	Financial Management for Health and Non-Profit Organizations (3)
PADM 6950	Introduction to Non-Profit Organizations (3)
PADM 6960	Resource Development for Non-Profit Organizations (3)
PADM 6970	Social Marketing for Non-Profit Organizations (3)
PADM 6980	Strategic Planning, Governance and Management Issues in Non-Profit Organizations (3)

The Non-Profit Management Certificate is awarded upon completion of the requisite 15 semester credit hours.

MAJOR: PUBLIC ADMINISTRATION DEGREE: DOCTOR OF PHILOSOPHY (PH.D.)

The Ph.D. program with a major in public administration is designed to serve the specialized interest of students preparing for either academic or professional public management careers.

The program emphasizes the various contexts and forms of public administration in society today as well as an understanding of knowledge areas basic to the profession. These in-

clude the application of theory and analytical techniques appropriate for solving management and policy problems and for making systematic inquiry into the discipline.

Because the curriculum explores and compares theory with administrative practice, students should enter the program with experience in public or non-profit administration. Applicants lacking this background are encouraged to pursue this degree later in their careers.

The Ph.D. program is designed to play a number of significant roles in public service. It provides:

1. students with the necessary education for meeting the increasingly complex challenges facing middle and senior managers at all levels of government.
2. public and non-profit organizations with qualified individuals who are capable of undertaking independent research of organizational, managerial, or public policy issues.
3. higher education institutions with instructors and researchers prepared to represent as well as advance the field and profession of public administration.
4. an environment conducive of research into management and public policy making.

Classes are scheduled with the fully employed individual in mind. Core and elective courses meet one evening per week. In addition, elective courses are available on weekends.

Prerequisites

Students entering the program must possess a Master's degree. The Master's degree, whether the MPA or other degree, should include the knowledge and skills common to an understanding of public administration. A student admitted to the Ph.D. program who has not acquired the requisite knowledge and skill base may expect a longer commitment of time to complete the Ph.D. degree. The prerequisite knowledge and skills include:

1. Quantitative Skills-statistical, research, and computer use.
2. Public Management-political, legal, social, and economic contexts of public administration.
3. Organizations-theory and analysis of organizations and the human resources within organizations.
4. Fiscal Management-operational and program audits, budgeting.

Admissions Process

Applicants for admission must provide the following items to the School of Graduate Studies: (1) Application for Admission to the Graduate School; (2) Application Fee; (3) Graduate Record Examination scores (only the General Test is required); (4) two official transcripts from all colleges and/or universities previously attended (to be submitted with the Application for Admission); (5) three letters of recommendation from persons familiar with the applicant's potential for doctoral level study in public administration; (6) a 500-1000 word essay discussing personal, academic, and career goals as well as interests and experience in the area of public administration; and (7) a sample copy of academic or professional writing (e.g., graduate term paper, thesis, academic/professional clinical study, or policy analysis/ management report).

Admissions Requirements

In addition to submitting the admissions application and materials, cited above, applicants must: (1) present a Graduate Record Examination score (verbal and quantitative scores combined) of at least 1,000; (2) possess a Master's degree; (3) have a grade point average of at least 3.25 in previous graduate studies; and (4) receive a positive recommendation from the Institute faculty committee evaluating the admission application and materials.

Transfer Credit

Students who have hours beyond the Master's degree may be permitted to apply a maximum of six semester hours of credit, for course work applicable to public administration, to the Ph.D. program. Credit for those hours will be granted at the time the student is advanced to candidacy.

Advisor

The Institute Director or Coordinator of Graduate Studies serves as the academic advisor for all students admitted to the Ph.D. program until the student's Dissertation Committee has been formed.

Residency

Ph.D. program participants must establish academic residency at TSU by completing the Quantitative Skills Core and two of the five Doctoral Core course within four (4) regular semesters.

Academic Load

Students who are on leave of absence from full-time employment or who have made arrangements to pursue studies on a full-time basis may take up to twelve (12) hours of credit a semester, with the approval of their advisor. Students working full-time in their professional capacities may enroll for no more than six (6) credit hours each semester.

Early Review

After nine credit hours of enrollment in the doctoral programs, students will be interviewed and evaluated as to their strengths and weaknesses performing in the program to date. Remediation or other action may be indicated at this time.

Time Limitation for Credit

Post-Master's degree credit hours earned more than ten (10) years prior to a student's graduation may not be applied toward the Ph.D. degree.

Analytical Managerial Tools Proficiency

In order to satisfy the analytical tools requirement, students must successfully complete the Quantitative Skills Core. This includes course work in research and management tools, including PADM 7130, in which a major research design must be prepared, and PADM 7140, in which a major statistical analysis and report must be prepared. In addition, students must complete a dissertation proposal including demonstration of competence in research and management methods. The proposal must be a major work on the conceptual framework and methodology of the dissertation.

Preliminary Examination

The student must pass an examination to determine if the student has acquired the skills and knowledge to start work on the dissertation. In order to take this preliminary examination, the student must:

1. be in good academic standing.
2. have completed a minimum of 24 semester hours of course work beyond the Master's degree, including all Quantitative Skills Core and Doctoral Core courses.
3. have a cumulative GPA of at least 3.0 including a minimum average GPA of 3.0 in Core course work.
4. have filed the Declaration of Intent to Take the Preliminary Examination form during the semester preceding the semester in which the examination is taken. The form must be filed by the end of April for a fall semester examination and by the end of October for the spring semester examination.

The preliminary examination is offered twice each year, early in a regular semester. The examination is in two parts, one written and one oral. The written exercise is given first. The oral portion of the examination is conducted by a committee of at least three Institute faculty members appointed by the Director. A student failing the preliminary examination may be retested only once, and only on the recommendation of the examining committee.

Candidacy

The student must be admitted to candidacy prior to registering for dissertation research credit. The Admission to Candidacy form may not be filed until:

1. the student has successfully completed the preliminary examination;
2. the student has successfully defended the prospectus to the Dissertation Committee.

Dissertation Committee

The student, in close consultation with the Institute Coordinator of Graduate Studies, recommends three graduate faculty members to serve as a Dissertation Committee. At least two of the members must be Institute faculty and one of these must agree to chair the Committee. The Director of the Institute, in consultation with the Coordinator of Graduate Studies, designates the Committee membership and chair. Once the Committee is formed, the Committee chair serves as the student's academic advisor. The Dissertation Committee has the responsibility of providing guidance to the student for the remainder of the student's program as well as approving the dissertation prospectus and the dissertation.

Areas of Specialization

Students are encouraged to concentrate elective course work in an area of specialization designed in consultation with the student's Dissertation Committee.

Dissertation

Once admitted to candidacy, the student should register for dissertation research credit. The student must enroll for a minimum of 12 semester credit hours of dissertation research. Once students begin the dissertation, they must register for PADM 8110 every semester until the dissertation is complete.

After 12 credit hours have been completed, students register for "Dissertation Continuation" at a reduced fee.

The student must engage in original and significant research in public administration or public policy, guided in this endeavor by the student's Dissertation Committee. On the basis of this research, the student must write a work of publishable quality adhering to the style and format required by the Graduate School. The final draft of the dissertation must be acceptable to all members of the student's Dissertation Committee.

Final Oral Examination

After acceptance of the final dissertation draft, the Director of the Institute shall appoint one graduate faculty member from the Institute and the Dean of the School of Graduate Studies and Research shall appoint one graduate faculty member from outside the Institute, who together with the members of the Dissertation Committee sit as the final examining body. The student must make an oral defense of the dissertation before this body and in the presence of all others who choose to attend. In defending the dissertation, the student is expected to relate its significance to the field of knowledge to which it contributes and to the general field of public administration.

The student is judged to have passed the final oral examination if at least 4 of the 5 examining committee members certify to that effect. Students failing the final oral examination may be reexamined only once.

Credits Needed

A total of 72 semester hours of post-baccalaureate credits are required, exclusive of dissertation credits. Up to 36 of these hours may be credits earned in a Master of Public Administration degree, or its equivalent, at TSU or elsewhere. If the Master's degree is in an allied field, fewer credit hours may apply to the Ph.D. Credits needed to meet Ph.D. requirements must include each of the seven core courses cited in the program of study, below.

PROGRAM OF STUDY

Students should submit a Program of Study during the first semester of coursework.

Quantitative Skills Core—6 hours

PADM 7130	Research Methodology in Public Administration	3
PADM 7140	Applied Quantitative Techniques in Public Administration	3

Doctoral Core—15 hours

PADM 7000	Theory and Practice of Public Administration	3
PADM 7220	Administrative Management	3
PADM 7230	Public Budgeting II	3
PADM 7310	Public Organization Theory	3
PADM 7410	Public Policy Implementation	3

Doctoral Electives—15 hours

Elective courses must be selected in consultation with the student's advisor and may be chosen from Institute offerings. Upon the recommendation of the student's advisor and the approval of the Institute Director, a portion of this work may be taken outside of the Institute.

Dissertation Research—12 hours (minimum)

COURSE DESCRIPTIONS

PADM 6110. STATISTICS FOR PUBLIC ADMINISTRATORS I. (3) This course introduces basic statistical techniques for public administration. Topics include measurement, analysis and reporting of data. Required for MPA and Health Planning Certificate.

PADM 6120. STATISTICS FOR PUBLIC ADMINISTRATORS II. (3) Prerequisite 6110. Continuation of 6110.

PADM 6130. RESEARCH METHODS IN PUBLIC ADMINISTRATION. (3) Focusing on behavioral approaches, this course surveys the major methods and techniques of research in public administration. Required for MPA and Health Planning Certificate.

PADM 6150. INFORMATION TECHNOLOGY IN THE PUBLIC SECTOR. (3) This course addresses how information technology influences public agencies' structure, behavior and decision making as well as how IT affects managerial roles and shapes interactions with citizens and other organizations. Students examine topics such as: information security and safety, privacy, ethics, and implications for the workforce and employee morale. Attention is given to the Internet and government intranets. Required for MPA.

PADM 6190. FINANCIAL MANAGEMENT FOR HEALTH AND NON-PROFIT ORGANIZATIONS. (3) This course covers theory and application of financial management systems and techniques in health and non-profit organizations. It seeks to enhance financial decision making skills through application of analytical concepts and decision techniques to a variety of situations. Particular attention is paid to accounting procedures, techniques for financial analysis, investment in long-term assets, budgeting systems, cash management, risk management, and debt management.

PADM 6210. SEMINAR IN PUBLIC ADMINISTRATION. (3) This seminar surveys public administration theory, approaches to public management and contemporary problems in public administration. Required for MPA. Prerequisite: PISI 2010 or equivalent undergraduate or graduate level American national government course.

PADM 6220. SEMINAR IN ADMINISTRATIVE LAW. (3) This seminar reviews legal considerations that affect administrative decision-making, regulations and management in government organizations.

PADM 6230. SEMINAR IN FISCAL MANAGEMENT: PUBLIC BUDGETING. (3) This course views budgeting in a broad perspective providing a familiarity with the economic and political implications of public budgeting; the budgetary process; types and uses of budgetary data systems; and recent efforts to rethink budgetary techniques at the federal, state, and local levels in government. Required for MPA.

PADM 6240. SEMINAR IN STAFF FUNCTIONS: PERSONNEL. (3) This course provides an overview of the issues and techniques that may be used by public administrators in the selection, evaluation, career development, compensation, and separation of employees.

PADM 6250. SEMINAR IN STAFF FUNCTIONS: PROGRAM EVALUATION. (3) This seminar deals with the role and scope of program evaluations at all levels of government. Emphasis is placed on techniques for evaluating public program impact at the state and local levels.

PADM 6260. SEMINAR IN STAFF FUNCTIONS: BUDGETING AS A MANAGEMENT TOOL. (3) This course emphasizes the policy and managerial aspects of public budgeting. Opportunity is provided to focus upon a limited number of relevant issues or processes such as: information systems, zero-based budgeting, analysis of budgeting systems, operational and program auditing.

PADM 6270. SEMINAR IN ADMINISTRATIVE LEADERSHIP: THE PUBLIC EXECUTIVE. (3) This seminar examines alternative theories and approaches to leadership in organizations and their implications for the public manager.

PADM 6290. SEMINAR IN INTERGOVERNMENTAL ADMINISTRATION. (3) This course seeks to provide an appreciation of the challenges confronting public administration in a federal environment and an opportunity to develop a "working philosophy" of intergovernmental administration.

PADM 6310. SEMINAR IN ORGANIZATION THEORY. (3) This seminar reviews major theories of organization and their applicability to public sector agencies including study of administrative behavior in organizations. Required for MPA.

PADM 6320. SEMINAR IN ORGANIZATIONAL ANALYSIS. (3) The seminar is a study of the design of organizations as a factor in their ability to adapt successfully to change. Current programs and topics in organizational development are discussed.

PADM 6330. SEMINAR IN PUBLIC MANAGEMENT. (3) The seminar examines selected problems in public management.

PADM 6360. SEMINAR IN ORGANIZATIONAL BEHAVIOR. (3) This seminar is a study of organizational behavior as a product of interactions between and among organizational members.

PADM 6390. ETHICS AND VALUES IN THE PUBLIC SERVICE. (3) This course is a critical investigation of ethics, ideals and values commonly attributed to public service in the United States. These include efficiency, competence and responsibility; rule of law; democratic participation; public interest and compassion.

PADM 6410. SEMINAR IN PUBLIC POLICY ANALYSIS. (3) The focus of this seminar is on the role of administrators in policy analysis and decision-making, with emphasis on the study of methods and techniques by which public policies can be analyzed and evaluated. Required for MPA.

PADM 6430. SEMINAR IN CONTEMPORARY PUBLIC POLICIES. (3) The purpose of this seminar is to examine problems in one or more public policy areas from political and administrative perspectives. Topics will be selected by the instructor. (May be repeated once as different topics are selected for course focus.)

PADM 6440. SEMINAR IN URBAN ADMINISTRATION . (3) This seminar is an analysis of political institutions and administrative processes in metropolitan areas.

PADM 6470. SEMINAR IN TENNESSEE GOVERNMENT. (3) This seminar is an intensive analysis of selected governmental problems in Tennessee.

PADM 6480. SEMINAR IN BUSINESS AND GOVERNMENT. (3) The focus of this seminar is government regulations and the interrelationship and interdependence of the public and private sectors.

PADM 6490. SEMINAR IN POLITICS OF ADMINISTRATION. (3) This seminar addresses the ways in which parties, political action committees, interest groups, legislators, the courts, other agencies and professional groups shape administrative action, public policy and organizational structure(s). Required for MPA.

PADM 6500. INTERNSHIP IN THE PUBLIC SERVICE. (6) Students not exempt from the internship requirements will fulfill the internship under a joint administrative arrangement between the MPA program and a designated agency. Permission of instructor or program director required.

PADM 6510. MANAGEMENT OF HEALTH AGENCIES. (3) This course surveys the major administrative approaches within public agencies that administer health programs. Skills are developed through case problem-solving.

PADM 6520. HEALTH POLICY IN THE U.S. (3) This course is a study of the organization and delivery of health services in the U.S. Current problems affecting the delivery of services and alternative systems and reforms are analyzed.

PADM 6530. TOPICS IN ADMINISTRATION OF HEALTH AND HUMAN SERVICES PROGRAMS. (3) Selected topics in the areas of health and human service administration provide the focus of this course.

PADM 6540. PLANNING AND PROBLEM SOLVING IN HEALTH SERVICES. (3) Health program planning approaches are reviewed and analyzed in this course, including means of organizing community and public organizations to solve particular health problems.

PADM 6550. EPIDEMIOLOGY. (3) This seminar examines the distribution and determinants of health related outcomes in specified populations. Emphasis is placed upon the historical origins of the discipline, measurement techniques, data and error sources, etiological reasoning, disease screening and injury control. Required for Health Planning Certificate.

PADM 6560. GOVERNMENT PURCHASING. (3) Addresses the issues and challenges facing managers involved in or with the procurement of products, services and construction for state and local government. Special attention is given to the impact of effective purchasing and construc-

tion on government operations and service delivery, as well as the changing role of procurement officers.

PADM 6600. INDEPENDENT READING IN PUBLIC ADMINISTRATION. (3) Selected topics are examined under an arrangement between students and an instructor. Permission of the instructor is required prior to registering for this course. May be repeated once upon approval of adviser.

PADM 6610. STATE AND LOCAL FINANCIAL MANAGEMENT. (3) Managerial approaches and techniques, conceptual ideas and theories, and institutional knowledge of state and local government financial management are topics to be considered in this course.

PADM 6630. APPLIED BUDGETING AND FINANCIAL MANAGEMENT. (3) This course offers a critical review of public budgeting and financial management processes and systems. The student will undertake a substantive evaluation of an on-going financial management operation or process.

PADM 6700. THESIS. (6)

PADM 6900. SPECIAL TOPICS IN PUBLIC ADMINISTRATION. (1-6) This course pursues selected topics in the area of public administration. Credits earned may not be applied towards the MPA degree, but may be applied toward other graduate degrees.

PADM 6910. SPECIAL TOPICS IN PUBLIC ADMINISTRATION. (1) Focusing on particular topics in the area of public administration, this course may be repeated twice as different topics are selected.

PADM 6920. SPECIAL TOPICS IN PUBLIC ADMINISTRATION. (2) Focusing on particular topics in the area of public administration, this course may be repeated twice as different topics are selected.

PADM 6930. SPECIAL TOPICS IN PUBLIC ADMINISTRATION. (3) Focusing on particular topics in the area of public administration, this course may be repeated twice as different topics are selected.

PADM 6940. SPECIAL TOPICS IN PUBLIC ADMINISTRATION. (3) The intent of this course is to provide special study on selected topics in the area of public administration. May be repeated once upon approval of adviser.

PADM 6950. INTRODUCTION TO NON-PROFIT ORGANIZATIONS. (3) This seminar presents an overview of the history, operation and structure of non-profit organizations. Particular attention is paid to the legal requirements of incorporation and the ethical and philosophical orientation of such organizations.

PADM 6960. RESOURCE DEVELOPMENT FOR NON-PROFIT ORGANIZATIONS. (3) This course focuses on the various sources of revenue available to support non-profit organizations and techniques for marshaling this support. Topics include: demographic, geographic and cultural forces; types of donors and donor institutions; the fund raising process; planning a campaign; techniques and strategies; marketing strategies; requisites for successful and ethical fund-raising; federal and state regulations.

PADM 6970. SOCIAL MARKETING FOR NON-PROFIT ORGANIZATIONS. (3) Social marketing is an important tool to enable non-profit organizations to fulfill their missions. This marketing course will focus upon how non-profit organizations can get individuals or communities to change their behaviors, not for the benefit of the organization, but for the benefit of the individuals or communities targeted. Students will be responsible for completing a Social Marketing Plan for a non-profit program. *Required for Certificate in Non-Profit Management.*

PADM 6980. STRATEGIC PLANNING AND MANAGEMENT ISSUES FOR NON-PROFIT ORGANIZATIONS. (3) This seminar will address important management and strategic planning issues facing non-profit administrators.

Enrollment in the following courses is limited to students admitted to the Ph.D. program. Other doctoral students may be enrolled with the permission of the Director of the Institute of Government.

PADM 7000. SEMINAR IN THEORY AND PRACTICE OF PUBLIC ADMINISTRATION. (3) This seminar involves analysis and survey of the seminal literature impacting upon the development of the study of public organizations in general and the study of public administration as a discipline. Required for Ph.D.

PADM 7130. RESEARCH METHODOLOGY IN PUBLIC ADMINISTRATION. (3) This seminar includes an advanced survey of topics in research design. Students must complete a quantitative research design as part of requirements for the course. Required for Ph.D.

PADM 7140. APPLIED QUANTITATIVE TECHNIQUES IN PUBLIC ADMINISTRATION. (3) This seminar focuses on the analysis of large or small data sets through the utilization of the Statistical Package for Social Sciences or through some other software package. Report writing functions are covered. Required for Ph.D.

PADM 7220. SEMINAR IN ADMINISTRATIVE MANAGEMENT. (3) This seminar emphasizes management tools as applied to public institutions. Required for Ph.D.

PADM 7230. PUBLIC BUDGETING II. (3) This seminar addresses advanced topics in public budgeting. Required for Ph.D.

PADM 7310. SEMINAR IN PUBLIC ORGANIZATION THEORY. (3) This seminar includes a critical review of theoretical developments and recent trends in organization theory and an analysis of the relevance of those developments for public sector managers. Required for Ph.D.

PADM 7410. SEMINAR IN PUBLIC POLICY IMPLEMENTATION. (3) This seminar focuses on models of the implementation phase of the policy process drawing on organization theory, decision-making and innovation literature. Required for Ph.D.

PADM 8110. DISSERTATION RESEARCH. (3-12) This course may be repeated. Required for Ph.D.

GRADUATE FACULTY

Arie Halachmi, Professor

B.A., 1964, M.A., 1970, Hebrew University; Ph.D., 1972, State University of New York at Buffalo

William Kraus, Assistant Professor

B.A., 1960, University of California, Riverside; MPA, 1967; M.S., 1970 and DPA 1975, University of Southern California

Ann-Marie Rizzo, Professor and Director

B.A., 1969, Ithaca College; M.A., 1971, Ph.D., 1974, Syracuse University

Chester Robinson, Assistant Professor

B.A. Grambling, 1971; M.L.A., 1975, Johns Hopkins University; MPS, 1980, University of Maryland; DPA, 1989, George Mason University

Bruce D. Rogers, Professor

B.A., 1965, State University of New York at Binghamton; M.A., 1967, Brooklyn College; Ph.D., 1973, Indiana University

Alex S. Sekwat, Professor and Associate Dean of Graduate School

B.S., 1985, University of Khartoum; M.P.A., 1988, Arkansas State University; Ph.D., 1994, Florida Atlantic University

Rodney E. Stanley, Associate Professor

B.S., 1995, Tennessee Temple University; M.P.A., 1997, University of Tennessee at Chattanooga; Ph.D., 2001, Mississippi State University

Diane Wilde, Assistant Professor

B.A., 1972, Middle Tennessee State University; MPA, 1990, Ph.D., 2002, Tennessee State University

SCHOOL OF AGRICULTURE AND CONSUMER SCIENCES

SCHOOL OF AGRICULTURE AND CONSUMER SCIENCES

Constantine L. Fenderson, Ph.D., Interim Dean
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DEPARTMENT OF AGRICULTURAL SCIENCES

Constantine L. Fenderson, Ph.D., PAS,
DPL.ACAN, Department Head
Office: 108 Lawson Hall
(615) 963-5435 OR 7620

**CERTIFICATE: APPLIED GEOSPATIAL
INFORMATION SYSTEMS**

MAJOR: AGRICULTURAL SCIENCES
DEGREE: MASTER OF SCIENCE (M.S.)
OPTIONS: Thesis, Non-Thesis
CONCENTRATIONS:

- I. Agribusiness
- II. Agricultural Education
- III. Animal Science
- IV. Plant Science

MAJOR: BIOLOGICAL SCIENCE
**DEGREE: DOCTOR OF PHILOSOPHY
(Ph.D.)**

OBJECTIVES

The program in Agricultural Sciences is designed to:

1. Prepare research scholars in the increasingly complex scientific field of agriculture.
2. Prepare scholars for rewarding careers in government and the agricultural industry.
3. Prepare scholars for leadership roles in professional agriculture.
4. Prepare scholars for further training in doctoral programs.
5. Provide advanced training in agricultural education for graduates working in secondary schools and vocational agriculture.

The Graduate Certificate in Applied Geospatial Information Systems (GIS) is an online stand-alone credential designed for degree-holding individuals who wish to develop their knowledge and skills in GIS for enhancement of their professional careers. The program will prepare individuals to meet the rapidly increasing need for graduates highly qualified in the application and use

of GIS. Certificate courses are designed and taught with a practical, applied orientation. The Certificate program requires the completion of six courses (18 semester credit hours) in GIS and Global Positioning Systems (GPS), and can be completed by a part-time student within twelve months.

The Master of Science in Agricultural Sciences is offered with four concentrations: Agribusiness, Agricultural Education, Animal Science, and Plant Science. The degree requires a minimum of twenty-six (26) credit hours of course work and a thesis of four (4) credit hours. The candidate for the degree must complete twelve (12) credit hours of core courses: AGSC 5060, AGSC 5110, AGSC 5120, AGSC 5610-5620; twelve (12) credit hours minimum of required courses in the selected concentration; and six (6) hours maximum of electives. These courses must be approved by the advisor and department head.

The Ph.D. in Biological Science is an interdepartmental degree program offered by the Department of Biological Sciences in the College of Arts and Sciences and the Department of Agricultural Sciences in the School of Agriculture and Consumer Sciences. Admissions procedures for the Ph.D. program are outlined under the Department of Biological Sciences. The major advisor will be appointed by the department offering the student's primary emphasis. Course descriptions are listed under the respective departments.

**CERTIFICATE: APPLIED GEOSPATIAL
INFORMATION SYSTEMS**

Admission Process

Applicants for the Certificate must hold a baccalaureate degree from an accredited institution of higher education and must meet the Graduate School requirements for non-degree admission and retention as published in the University catalog. Requests for application forms and materials should be directed to the School of Graduate Studies and Research.

Certificate Requirements

To earn the Graduate Certificate in Applied Geospatial Information Systems, students must satisfactorily complete the following courses:

AGSC 6510	Advanced Geospatial Information Systems
AGSC 6520	Advanced Spatial Analysis
AGSC 6530	Advanced Geospatial Metadata
AGSC 6540	Advanced Spatial Database Design and Management
AGSC 6550	Advanced Geospatial Information Systems Application and Design
AGSC 6560	Advanced Global Positioning Systems

The Certificate is awarded upon the successful completion of the six courses (18 semester credit hours).

MAJOR: AGRICULTURAL SCIENCES
DEGREE: MASTER OF SCIENCE (M.S.)
OPTIONS: Thesis, Non-Thesis
CONCENTRATIONS:
Agribusiness, Agricultural Education, Animal Science, Plant Science

Admission Requirements: M.S. Program

Candidates must have the equivalent of the bachelor's degree with a major in one of the Agricultural Sciences and a minimum quality grade point average of 2.50 on a 4.00 point scale and a minimum score of 870 on the GRE (verbal and quantitative, or verbal, quantitative and subject), or 370 on the MAT for unconditional admission. An applicant with a bachelor's degree in areas other than the Agricultural Sciences may be recommended to the Graduate School for conditional admission and be required to take eighteen (18) credit hours of undergraduate prerequisite courses in the Agricultural disciplines: 6 hours from Animal Science, 6 from Plant Science and 6 from Agribusiness, or Agricultural Education. An applicant may also be recommended for conditional admission if he or she has a 2.25-2.49 GPA and a minimum pre-admission test score of 935 on the GRE or 383 on the MAT or 2.00-2.24 GPA and a minimum pre-admission test score of 1000 on the GRE or 394 on the MAT.

Program of Study/Admission to Candidacy: M.S. Program

The degree candidate must file a program of study after completing at least nine semester hours of graduate credit, but before completing fifteen hours of graduate credit. The program lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

When the candidate files the program of study, he or she must also apply for admission to candidacy. The candidate must have a grade point average of 3.0 or above to be eligible for admission to candidacy.

Degree Requirements: M.S. Program

Thesis

Each student must pass Research Methods (AGSC 5110), must have a thesis guidance committee appointed, and must be advanced to candidacy before enrolling in Thesis Writing (AGSC 5120).

The candidate must submit a thesis on a topic approved by the major advisor. Upon completion of the thesis, the candidate must satisfactorily pass an oral examination conducted by the Thesis Examination Committee.

Non-Thesis

The option is for students who would like to focus on training in specialized areas to meet the needs of employers in agricultural product processing, marketing organizations, input supply

firms, teaching, agricultural extension services, and various state and federal government agencies. This program is not recommended for students who have any aspirations toward pursuing a Ph.D.

Students choosing the non-thesis option will be required to take a minimum of 35 hours of course work which will include AGSC 5350 Independent Study of Contemporary Issues and Problems.

Comprehensive Examination

Upon completion of AGSC 5350 and during the semester of graduation, students choosing the non-thesis option must take a comprehensive written and oral examination administered by the student's advisory committee and other faculty members representing appropriate subject matter areas. The student's major advisor will serve as chairperson of the committee conducting the examination.

If a student fails the comprehensive examination, one retake will be allowed. Should the student again fail, a third and final examination may be taken upon completion of additional course work (minimum of 6 hrs) to be selected by the student's advisory committee.

PROGRAMS OF STUDY

Core Courses, All Concentrations—Thesis 12 hrs, or Non-Thesis 11 hrs.

AGSC 5060	Statistics for Res. Workers	3
AGSC 5110	Research Methods	3
AGSC 5120	Thesis Writing	4
or AGSC 5350	Independent Study	3
AGSC 5610-5620	Seminar	1,1

CONCENTRATION I: AGRIBUSINESS REQUIRED COURSES—12 HRS. MINIMUM, THESIS OR 15 HRS. MINIMUM NON-THESIS

AGSC 5080	Agribusiness Management and Market Analysis	3
AGSC 5090	Food and Fiber Industry Economics and Policy	3
AGSC 5100	Environmental, Resource Economics and Management	3
AGSC 5300	Decision-Making in Agribusiness Quantitative Appl.	3
AGSC 5310	International Agricultural Trade and Marketing	3
AGSC 5330	Agribusiness Strategy	3

Electives—6 hrs. maximum, Thesis or 9 hrs. maximum, Non-Thesis with the approval of the advisor and department head.

BISE 5020	Managerial Communication	3
BISI 6370	Seminar in Information Systems	3
ECON 6200	Economic Development	3
MGMT 6120	Seminar in Managerial Problems	3
MGMT 6090	International Management	3
ECON 6110	Managerial Economics	3
MGMT 6010	Organizational Theory	3
AGSC 5040	Program Planning and Evaluation in Vocational Education	3
AGSC 5050	Special Problems in Vocational Education	3

AGSC 5150	Livestock Management	3
AGSC 5180	Soil Classification	3

**CONCENTRATION II: AGRICULTURAL EDUCATION
REQUIRED COURSES—12 HRS. MINIMUM, THESIS OR
15 HRS. MINIMUM NON-THESIS**

AGSC 5010	Federal Relations to Vocational Education	3
AGSC 5020	Occupational Studies in Vocational Education	3
AGSC 5030	Organization and Vocational Education	3
AGSC 5040	Program Planning and Evaluation in Vocational Education	3
AGSC 5050	Special Problems in Vocational Education	3

**Electives—6 hrs. maximum, Thesis or 9 hrs. maximum,
Non-Thesis with the approval of the advisor and
department head.**

AGSC 5080	Agribusiness Management and Market Analysis	3
AGSC 5090	Food and Fiber Industry	3
AGSC 5100	Environmental Resource Economics	3
AGSC 5140	Special Problems in Animal and Poultry Science	3
AGSC 5150	Livestock Management	3
AGSC 5220	Plant Growth Substances	3
AGSC 5260	Soil and Plant Analysis	3
EDCI 5260	Philosophy of Education	3
EDCI 5270	Advanced Social Studies	3
PSYC 5430	Advanced Educational Psychology	3

**CONCENTRATION III: ANIMAL SCIENCE
REQUIRED COURSES—12 HRS. MINIMUM, THESIS OR
15 HRS. MINIMUM NON-THESIS**

AGSC 5130	Animal Nutrition	3
AGSC 5140	Special Problems in Animal and Poultry Science	3
AGSC 5150	Livestock Management	3
AGSC 5160	Animal Genetics and Breeding	3
AGSC 5170	Advanced Poultry Production and Management	3

**Electives—6 hrs. maximum, Thesis or 9 hrs. maximum,
Non-Thesis with the approval of the advisor and
department head.**

AGSC 5090	Food and Fiber Industry	3
AGSC 5100	Environmental Resource Economics	3
AGSC 5180	Soil Classification	3
AGSC 5220	Plant Growth Substances	3
AGSC 5260	Soil and Plant Analysis	3

**CONCENTRATION IV: PLANT SCIENCE
REQUIRED COURSES—12 HRS. MINIMUM, THESIS OR
15 HRS. MINIMUM NON-THESIS**

AGSC 5180	Soil Classification	3
AGSC 5190	Plant Breeding	3
AGSC 5220	Plant Growth Substances	3
AGSC 5230	Advanced Propagation of Horticultural Plants	3
AGSC 5240	Advanced Pomology	3
AGSC 5260	Soil and Plant Analysis	3

**Electives—6 hrs. maximum, Thesis or 9 hrs. maximum,
Non-Thesis with the approval of the advisor and
department head.**

AGSC 5090	Food and Fiber Industry	3
AGSC 5100	Environmental Resource Economics	3
AGSC 5130	Animal Nutrition	3
AGSC 5150	Livestock Management	3
AGSC 5160	Animal Genetics and Breeding	3

**MAJOR: BIOLOGICAL SCIENCES
DEGREE: DOCTOR OF PHILOSOPHY
(Ph.D.)**

Admission Requirements: Ph.D. Program

See admission requirements under Ph.D. Program - Department of Biological Sciences.

Program of Study: Ph.D. Program

The degree candidate must file a program of study after completing nine semester hours of graduate work, but before completing fifteen hours of graduate work. The program lists the courses which will be used to satisfy degree requirements, as well as detailing how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

Admission to Candidacy: Ph.D. Program

The student must apply for admission to candidacy after completing the 23-hour core of required courses (See Degree Requirements: Ph.D. Program, below.) With an average of B (3.0) or better, passing the comprehensive examination, and gaining approval of the dissertation proposal.

Degree Requirements: Ph.D. Program

Degree candidates must complete the core of required graduate courses (24 hours) with a grade of B or better in each course, pass the comprehensive examination, and gain approval of their dissertation proposal prior to obtaining admission to candidacy for the doctoral degree. After gaining admission to candidacy the student must complete an approved curriculum (24 hours minimum of electives set by the student's research advisory committee), enroll in Graduate Seminar (BIO 5010, 5020) or the Seminar in Biology every semester (BIO 7010, 7020), complete a dissertation (24 hours), and successfully defend the dissertation prior to gaining the Ph.D. degree.

Required Courses: 24 Hours

To be completed prior to Admission to Candidacy

BIOL 5100	Literature and Methods in Research	3
BIOL 5180	Cell Biology	3
BIOL 6100	Frontiers in Molecular Science	3
BIOL 7120	Molecular Biology	3
CHEM 5410, 5420	Advanced Biochemistry I, II	6
CHEM 5600	Spectroscopic Methods in Chemistry	3
STAT 5210	Statistical Methods I	3

After Admission to Candidacy: 52 Hours

Electives		24
BIOL 5010, 5020	Graduate Seminar I, II	1, 1
BIOL 7010, 7020	Seminar in Biology I, II	1, 1
BIOL 8110	Dissertation Research	24

Graduate Elective Courses

AGSC 5160	Animal Genetics and Breeding	3
AGSC 5190	Plant Breeding	3
AGSC 7010	Advancements In Agricultural Biotechnology	3
AGSC 7020	Economic, Regulatory and Ethical Issues in Biotechnology	3
AGSC 7030	Gene Expression and Regulation In Higher Plants	3
AGSC 7040	Plant Tissue Culture Methods and Applications	3
AGSC 7050	Biotechnology in Animal Reproduction	3
AGSC 7060	Advanced Soil Technology	3
AGSC 7070	Molecular Genetics Ecology	3

COURSE DESCRIPTION

AGSC 5010. FEDERAL RELATIONS TO VOCATIONAL EDUCATION. (3) The historical development of legislative efforts toward the encouragement of a national structure of vocational education, educational and societal needs pertinent to legislative consideration; program development resulting from legislative guidelines.

AGSC 5020. OCCUPATIONAL STUDIES IN VOCATIONAL EDUCATION (AGRICULTURE). (3) Study of procedures and practices for determining manpower needs; analysis of occupational clusters; study of identification and development of manpower sources.

AGSC 5030. ORGANIZATION AND MANAGEMENT OF VOCATIONAL EDUCATION PROGRAMS. (3) Study of the organization of vocational and occupational programs; study of principles and concepts of program management; study of the techniques and procedures for program development.

AGSC 5040. PROGRAM PLANNING AND EVALUATION IN VOCATIONAL EDUCATION. (3) Concepts and principles of planning vocational and technical programs at the local, regional, and state level; utilization of advisory councils and citizen committees; study of the administrative structure and legislative mandates, principles and techniques of program evaluation.

AGSC 5050. SPECIAL PROBLEMS IN VOCATIONAL EDUCATION. (3) Students will be allowed to select a problem of interest, conduct an exhaustive literature search and present findings in written form. Discussion of progress will prevail during class periods.

AGSC 5060. STATISTICS FOR RESEARCH WORKERS. (3) Training and skills in research design, analyzing data, presentation of data, and drawing conclusions, with special emphasis on descriptive inferences.

AGSC 5080. AGRIBUSINESS MANAGEMENT AND MARKET ANALYSIS. (3) Introduction to and growth of the U.S. agribusiness industry, its scope and composition. Evolution and composition of basic managerial principles, organization, operation, and administration of agribusiness firms especially under situation of risk and uncertainty. Managerial Methodology Application of economic theory and Statistical methods, the analysis of prices, and marketing of agribusiness products.

AGSC 5090. FOOD AND FIBER INDUSTRY: ECONOMICS & POLICY. (3) The economics of production, competition, markets, and policy for the food and fiber sector of the economy. While the course stresses functional relationships and theoretical principles, descriptive material is included to enhance one's understanding of current problems and the interrelationships between agricultural and general economy, identification of relevant issues, review of criteria for evaluating program development of policies.

AGSC 5100. ENVIRONMENTAL, RESOURCE ECONOMICS AND MANAGEMENT. (3) The course analyzes major environmental and resource issues in relation to operations of agribusinesses using economic principles

and alternative management scenarios. Market and non-market approaches to valuation of environmental and natural resources will be discussed in conjunction with the regulatory framework and management institutions.

AGSC 5110. RESEARCH METHODS. (3) The objectives of this course are: (1) to develop an understanding of research philosophies, methods, and procedures; (2) to gain experience in developing and designing research projects, organizing and analyzing research data.

AGSC 5120. THESIS WRITING. (4) This course is designed to provide instruction that will enable the student to adequately prepare a thesis from his or her on-going thesis research under the direction of the major advisor and guidance committee. The format of the thesis must conform to that of the subject matter area and the requirements of the Graduate School.

AGSC 5130. ANIMAL NUTRITION. (3) Devoted to the study of nutrients and their metabolism; studies of recent developments in animal nutrition, experimental procedures and application in commercial feeding.

AGSC 5140. SPECIAL PROBLEMS IN ANIMAL AND POULTRY SCIENCE. (3) Students will be allowed to select a problem of interest, conduct an exhaustive literature search and present findings in written form. Discussions on progress will prevail during class periods.

AGSC 5150. LIVESTOCK MANAGEMENT. (3) Provides an opportunity for the student to receive advanced training in the care and management of purebred herds, commercial herds, and herd development.

AGSC 5160. ANIMAL GENETICS AND BREEDING. (3) A study of the principles of genetics with emphasis on breed improvement involving change of gene frequency, role of selection, selection table of contents, importance of pedigree and methods of estimating heritability.

AGSC 5170. ADVANCED POULTRY PRODUCTION AND MANAGEMENT. (3) Devoted to studying the principles and current practices in production, management and marketing of eggs, broilers, and turkeys; recognition of field problems, and how to solve such problems economically.

AGSC 5180. SOIL CLASSIFICATION. (3) A study of the basis of soil classification, genesis and morphology of zonal soils of the United States. Emphasis placed on the important series of Tennessee. Prerequisites: AGSC 2200, 4230. Two lectures and one laboratory.

AGSC 5190. PLANT BREEDING. (3) A study of the methods, principles and results of plant improvement work, hereditary variation and the general principles of plant breeding. Prerequisite: AGSC 1200. Three lectures.

AGSC 5220. PLANT GROWTH SUBSTANCES. (3) A general study of the organic substances which affect plant growth and development. Special emphasis will be placed on the auxins and cytokinins.

AGSC 5230. ADVANCED PROPAGATION OF HORTICULTURAL PLANTS. (3) A study of the methods of propagating horticultural plants, including seedage, cuttage, and grafting of both economic and ornamental plants. Two lectures and one laboratory period.

AGSC 5240. ADVANCED POMOLOGY. (3) A study of the development and performance of fruit plants as influenced by inheritance and environment. Two field trips required. Two lectures and one laboratory period.

AGSC 5260. SOIL AND PLANT ANALYSIS. (3) Fundamental principles involved in analyzing soils and plants. Current techniques and methods of interpretation of soil testing and plant analysis.

AGSC 5300. DECISION-MAKING IN AGRIBUSINESS: QUANTITATIVE APPLICATIONS. (3) This course develops expertise in quantitative problem-solving techniques necessary for decision-making in agribusiness with extensive use of computers. Introduction to the concepts and methods of applying econometric analyses to problems of economic research. Emphasis will be placed on the formulation and solution of business problems using selected quantitative tools such as linear programming, simulation, game theory, and inventory models.

AGSC 5310. INTERNATIONAL AGRICULTURAL TRADE AND MARKETING. (3) The course emphasizes economic development, trade theory, and its application to agricultural trade. Review of the fundamental trade theory, changing structure of international trade markets, U.S. trade policies for agriculture, and the role of international commodity trading agreement.

AGSC 5330. AGRIBUSINESS STRATEGY. (3) The course is designed to enhance learning through presentations of case studies and analyses of relevant issues by students and guest speakers from agribusinesses. Topics to be covered include but are not limited to location of business, supply of inputs, and international marketing tools.

AGSC 5350. INDEPENDENT STUDY-CONTEMPORARY ISSUES AND PROBLEMS. (3) A required course for students choosing the non-thesis option for a Master of Science Degree in Agricultural Sciences. Individual Study and Research under faculty guidance, resulting in a substantial piece of writing. The intent of this course is to broaden students understanding of theory and methods and apply them to analyze selected issues and problems in a broader context in various areas of agriculture. The students will apply (synthesize) knowledge gained in various courses in presenting issues and problems and integrating the materials learned so as to apply them in his/her area of interest or problem at hand. The course will reflect students' ability to analyze, explore, and synthesize knowledge and skill as well as communication skills.

AGSC 5610-5620. GRADUATE SEMINAR IN AGRICULTURAL SCIENCES. (1-1) Critical review of current literature in Agricultural Sciences. Required of all M.S. graduate students.

AGSC 6510 ADVANCED GEOSPATIAL INFORMATION SYSTEMS (3 CREDIT HOURS). Introduction to GIS principles and technology. This course presents a foundation for creating, editing, querying, and presenting geospatial data. Laboratory exercises use a hands-on approach to learning GIS software and hardware. This course is multidisciplinary and is designed for students in any field of study. Prerequisite: Good working knowledge of personal computers and the Microsoft Windows(r) operating system. This is an online course offered to candidates for the Graduate Certificate in Applied Geospatial Information Systems.

AGSC 6520 ADVANCED SPATIAL ANALYSIS (3 CREDIT HOURS). Fundamental concepts and analytical procedures used to abstract and simplify complex systems using geospatial information systems. This course emphasizes geometric, coincidence, and adjacency models as applied to surface analysis, linear analysis, raster analysis, topological overlay, and contiguity analysis. Spatial modeling will be used to describe, simulate, predict, and resolve real-world problems, issues, and systems. This is an online course offered to candidates for the Graduate Certificate in Applied Geospatial Information Systems. Prerequisite: AGSC 6510.

AGSC 6530 ADVANCED GEOSPATIAL METADATA (3 CREDIT HOURS). Data make up the most expensive component of a GIS and account for billions of dollars of expenditures annually. Metadata is data about data. It documents critical information about the data and the procedures used to create and maintain the data. This course explains metadata and its components, and teaches GIS users the how and why of documenting their data. Methodology and standards will follow the Federal Geographic Data Committee's Content Standard for Digital Geospatial Metadata and will conform to the National Spatial Data Infrastructure. This is an online course offered to candidates for the Graduate Certificate in Applied Geospatial Information Systems. Prerequisite: AGSC 6510.

AGSC 6540 ADVANCED SPATIAL DATABASE DESIGN AND MANAGEMENT (3 CREDIT HOURS). The accuracy and usability of data determine the analysis, output, and cost of any geospatial information system. This course presents the principles and techniques of geodatabase design, editing, and management needed to obtain required functionality from a GIS. This is an online course offered to candidates for the Graduate Certificate in Applied Geospatial Information Systems. Prerequisite: AGSC 6510.

AGSC 6550 ADVANCED GEOSPATIAL INFORMATION SYSTEMS APPLICATION AND DESIGN (3 CREDIT HOURS). Concepts and procedures used to successfully assess needs, evaluate requirements, design, and implement geospatial information systems. Emphasis will be placed on the data and technology needed to produce desired information products, and on cost-benefit analysis and project proposal development. This is an online course offered to candidates for the Graduate Certificate in Applied Geospatial Information Systems. Prerequisites: AGSC 6510, AGSC 6520.

AGSC 6560 ADVANCED GLOBAL POSITIONING SYSTEMS (3 CREDIT HOURS). Advanced principles, technology, and use of Global Positioning Systems. This course will present the advanced principles of navigation and positioning, GPS instrumentation, collection and processing of data, and integration with geospatial information systems. This online course is multidisciplinary and is designed for students in any field of study. Prerequisites: None

AGSC 7010. ADVANCEMENT IN AGRICULTURAL BIOTECHNOLOGY. (3). A review of recent advances in biotechnology in agriculture with emphasis on experimental techniques and application in improvement of livestock and crop production. Prerequisite: Animal and Plant Genetics (AGSC 3400).

AGSC 7020. ECONOMIC, REGULATORY AND ETHICAL ISSUES IN BIOTECHNOLOGY. (3). This course will analyze factors affecting the development of biotechnology using economic principles and discuss regulatory and ethical issues as they relate to plant and animal products and by-products. Prerequisites: At least 6 credits in economics courses, of which 3 credits should be in intermediate level economic theory.

AGSC 7030. GENE EXPRESSION AND REGULATION IN HIGHER PLANTS. (3). A study of gene structure in higher plants, and gene expression and its regulation in plant growth development, morphogenesis, reproduction, response to environmental stress and defense mechanism. Special topics such as transposable elements, Arabidopsis, molecular plant breeding will be included. Prerequisites: AGSC 5190 or BIO 5110.

AGSC 7040. PLANT TISSUE CULTURE METHODS AND APPLICATIONS. (3). Emphasis on hands-on laboratory procedures. Application of tissue culture techniques for the improvement of economic plants will be emphasized. Prerequisite: An introductory course in botany and plant physiology.

AGSC 7050. BIOTECHNOLOGY IN ANIMAL REPRODUCTION. (3). Discussion on the various advances in techniques used to enhance animal reproduction and livestock productivity. Basic concepts of mammalian reproductive function will be studied. However, students should have a working knowledge of reproductive physiology. Methods such as artificial insemination, embryo transfer, in vitro fertilization, and embryo manipulation will be covered. Topics will be viewed from basic and applied perspectives. A comprehensive review of current literature will be included as a part of all discussions. Laboratory time in connection with this course will provide hands-on experience with some practices associated with reproductive biology. Prerequisite: Previous course in Reproductive Physiology (3 hours).

AGSC 7060. SOIL TECHNOLOGY. (3). Evaluation of soil utilizing most recent advances in physical-chemical properties, soil structure, metric potential, water management/conservation techniques, and irrigation systems and pollution abatement. Prerequisites: AGSC 2200, 4230; Basic Chemistry and Calculus.

AGSC 7070. MOLECULAR GENETIC ECOLOGY. (3). This course will explore and explain the underlying sources of genetic variation in populations, how this variation can be detected and analyzed, and how to interpret observed variation. Also covered will be examples of the applications of molecular genetics in behavioral ecology and population genetics drawn from current literature. Emphasis will be placed on applying these principles in agricultural research. Prerequisites: Undergraduate or Graduate Genetics.

AGRICULTURAL SCIENCES FACULTY

Desh Duseja, Professor

B.S., 1961, M.S., 1963, Punjab Agri. University, Ludhiana, Pb., India; Ph.D., 1972, Utah State University

Constantine L. Fenderson, Professor, Head and Graduate Coordinator

B.S., 1969, Tuskegee Institute; M.S., 1972, Ph.D., 1974, Michigan State University

Robert E. Harrison, Professor

B.S., 1970, Louisiana Polytechnic Institute; M.S., 1972, Louisiana Tech University; Ph.D., 1975, University of Florida

Lema, Makonnen, Associate Professor

B.S., 1977 Haile Selassie University; M.S., 1980, Addis Ababa University; Ph.D., 1994, Oklahoma State University

Surendra Singh, Professor

B.S., 1963, M.S., 1965, Agra University; Ph.D., 1972, Pennsylvania State University

COLLEGE OF BUSINESS

COLLEGE OF BUSINESS

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MAJOR: BUSINESS ADMINISTRATION
DEGREE: MASTER OF BUSINESS
ADMINISTRATION (M.B.A.)

VISION

Our vision is to be broadly recognized for the high quality of our academic program, graduates who compete successfully in the global marketplace, a strong teaching and research faculty, and important outreach services to the Nashville area business community.

MISSION

Our mission is to educate business professionals for the future through a complementary combination of teaching, research, and service focused on contemporary business operations, entrepreneurship, and urban economic development.

GUIDING PRINCIPLES AND CORE VALUES

- Academic Integrity
- Collegiality
- Continuous Improvement
- Diversity
- Ethical Conduct
- Global Perspective
- Professionalism
- Scholarship
- Service
- Teamwork

PROGRAM OBJECTIVES

The TSU graduate business program adheres to the core values of the college and is designed to provide strategic, behavioral and technical competencies relevant to contemporary business practice. The objectives of the program provide the guidance for course design and development for the enhancement of student skills and to add value in both content and analytical/critical faculties.

The specific objectives are:

1. To enhance analytical and critical thinking skills
2. To apply theory to practice
3. To gain an ethical and international perspective throughout different aspects of business

4. To promote excellence in leadership and teamwork
5. Leverage technology to impart educational content and training relevant to business practice.

Admission Requirements

Anyone wishing to take courses for graduate credit must apply for admission to the Graduate School. General admission requirements for Graduate School are described elsewhere in this Catalog. In addition to requirements of the Graduate School, MBA applicants must meet the following requirements of the College of Business.*

1. 950 points based on the formula: 200 times 4-year undergraduate GPA plus GMAT score or;
2. 1000 points based on the formula: 200 times Junior-senior GPA plus GMAT score.

* Note—The minimum acceptable GMAT score is 400. At the discretion of the College of Business, consideration may be given for progressively responsible professional experience in evaluating applications to the program.

All documents, including transcripts, must be received by the Graduate School before a student will be considered for admission. Conditional admission is granted for one semester if student has 3.0 undergraduate GPA, has taken all prerequisites, and agrees to take GMAT during initial semester. To remain in the program the student must meet the 950 or 1,000 point criteria cited above.

All applicants are:

1. required to have or take basic Calculus;
2. expected to be competent in oral and written English;
3. expected to satisfy all prerequisite requirements in a particular discipline before enrolling in graduate-level courses in that discipline for credit; and
4. expected to satisfy all prerequisites by the time nine hours of graduate-level work are completed.

Students are required to maintain a 3.0 grade point average in the program. In required core courses, grades below “C” are not accepted for credit toward the degree. Advisors can help students plan a program of study and assist them in planning to meet successfully all requirements of their program. Students must be admitted on either a conditional or unconditional basis in order to take MBA degree courses.

Degree Requirements

1. Candidates must satisfy all prerequisites, complete core requirements and other approved courses to satisfy the minimum number of semester hours required for a graduate

degree, and accumulate a minimum GPA of "B" or 3.0 on a 4.0 system.

- Candidates must file application of "Admission to Candidacy" for the MBA degree after completing all required prerequisites and nine (9) semester hours of graduate course work taken in residence with a "B" average in all courses taken for graduate credit. The recommendation of the major advisor and approval of the Dean of the Graduate School are required.
- Candidates must file "Application for Graduation" approximately three (3) months prior to commencement, including clearance with the major advisor, the Dean of the Graduate School, the Business Office, the Placement Bureau, the Office of Admissions and Records, and the University Library.
- Candidates must attend commencement. The MBA degree may be awarded in absentia upon prior approval by the Dean of the Graduate School.

MBA PROGRAM OF STUDY

Foundation Courses

	Undergraduate Foundation Courses (Sem. Hrs.)	Graduate Foundation Courses (Sem. Hrs.)
Accounting Principles	6	4
Information Systems & Statistics	6	4
Economics Principles & Business Finance	9	4
Management & Marketing Principles	6	4
Legal & Ethical Environment of Business	3	-
Calculus (May be waived)	3	-
	33	16
		plus
		Calculus and
		Legal & Ethical Environment of Business

MBA Core Requirements—27 hours

ACCT 6010	Managerial Accounting/Controllershship	3
BISI 6130	Management & Evaluation of Information Systems	3
ECON 6010	Statistical Decision Making	3
ECON 6110	Managerial Economics	3
FINA 6300	Managerial Finance	3
MGMT 6020	Behavior In Organizations	3
MGMT 6060	Operations Management	3
MGMT 6110	Business Strategy & The Economic Environment	3
MKTG 6050	Marketing Management	3

MBA Elective Requirements—9 hours

3 elective courses in one area of concentration. 9

Total Semester Hours 36

CONCENTRATION I: ACCOUNTING 9 hours

ACCT 6170	Federal Tax Research	3
ACCT 6200	Accounting Information Systems	3
ACCT 6250	International Accounting	3

CONCENTRATION II: HEALTHCARE ECONOMICS & MANAGEMENT 9 hours

ECON 6510	Introduction to Healthcare Economics and Management	3
ECON 6520	Economics of Healthcare Organization, Regulation and Legal Issues in Healthcare	3

Plus one from the list below:

ECON 6600	Advanced Topics in Healthcare Economics and Management	3
ECON 6610	Advanced Topics in Healthcare Management and Insurance	3
ECON 6620	Directed Project in Healthcare Economics and Management	3
ECON 6630	International Healthcare Systems and Development Issues	3
ECON 6640	Operations Management and Economics of Healthcare Delivery Systems	3

CONCENTRATION III: SUPPLY CHAIN MANAGEMENT 9 hours

MGMT 6260	Integrated Supply Chain Management	3
MGMT 6220	Procurement Management	3
MKTG 6100	Logistics	3

CONCENTRATION IV: MANAGEMENT OF INFORMATION SYSTEMS 9 hours

BISI 6800	Strategic Information Systems	3
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Plus two courses from the list below:

BISI 6550	Project Management & Analysis	3
BISI 6750	Contemporary Information Technologies	3
BISI 6250	Decision Support Systems	3
BISI 6300	Business Telecommunications	3
BISI 6370	Seminar in Information Systems	3
BISI 6400	Electronic Commerce	3

CONCENTRATION V: GENERAL MBA 9 hours

Any three graduate elective business courses from any of the concentrations above.

COURSE DESCRIPTIONS

ACCOUNTING

ACCT 5000. FOUNDATION IN ACCOUNTING (4). General survey of the accounting fundamentals with major emphasis on the financial statement analysis, accounting information systems, and uses of financial statements for managerial decision-making and problem solving. Use of accounting data for internal managerial decision-making, CVP analysis, and contribution approach to decisions and capital budgeting. Not required for students with undergraduate accounting backgrounds. May not be used for elective credit.

ACCT 6010. MANAGERIAL ACCOUNTING/CONTROLLERSHIP (3). Studies of management accounting control systems and strategic cost analysis. Use of relevant costs for decision-making, planning, and evaluation of performance. Development of analytic tools drawn from cost accounting, managerial accounting, mathematics, and behavioral science. Prerequisites: ACCT 2120 or ACCT 5000.

ACCT 6170. FEDERAL TAX RESEARCH (3). (Formerly AC 636) A critical analysis of the federal income tax and the development of federal tax law, including taxation of individuals, corporations, partnerships, estates and trusts. Prerequisites: ACCT 3070, ACCT 6010.

ACCT 6200. ACCOUNTING INFORMATION SYSTEMS (3). Uses of information systems in tax, managerial/cost, auditing, and financial reporting processes. Evaluation of implementation alternatives. Prerequisites: ACCT 6010.

ACCT 6250. INTERNATIONAL ACCOUNTING (3). Research international accounting standards, foreign accounting standards, international issues of currency transactions and translations, transfer prices, and management planning and control. Prerequisite: ACCT 6010.

ACCT 6990. INDEPENDENT STUDY (1-3). (Formerly AC 634) A study of current literature applicable to the practice of professional accounting, including pronouncements by the American Institute of CPA's Financial Accounting Standards Board. Prerequisites: ACCT 6010 and consent of Dept. Head.

BUSINESS INFORMATION SYSTEMS (BISI)

BISI 5000. INFORMATION SYSTEMS AND STATISTICS (NOT FOR GRADUATE CREDIT). This survey course introduces students to information systems technology and its use as a business and management tool. It adopts an end-user oriented approach to the use, effects, development and management of information systems in organizations. In addition, the student is exposed to statistics with an emphasis on business and economic applications.

BISI 6130. MANAGEMENT AND EVALUATION OF INFORMATION SYSTEMS (3). This is a survey course of information technology (IT), and its impact and role in the business environment. Issues concerning the strategic, tactical, and operational uses of IT and information systems are discussed. The challenges and the methods of managing IT are presented using the socio-technical approach. Types of information systems and their application within organizations are discussed through case studies. Prerequisite: BISI 5000 or equivalent.

BISI 6250. DECISION SUPPORT SYSTEMS (3). The key technical and managerial issues in the development and use of decision support systems in organizations are addressed. The strategic management decision making process and the role of DSS in the process are explored. Contemporary topics including Expert Systems, Executive Information Systems, data warehousing, data visualization, and Group Decision Support Systems are reviewed. Research effort is on the real life use of these technologies in specific business areas. Prerequisites: BISI 5000 or instructor's consent.

BISI 6300. BUSINESS TELECOMMUNICATIONS (3). Provides a broad overview of the telecommunications field, the implications for business and industry and a current review of the research literature.

BISI 6370 SEMINAR IN INFORMATION SYSTEMS (3). Provides for the study of the current literature applicable to information systems technology. Topics investigated vary based upon current trends, issues, and problems that surface in the computing industry.

BISI 6400. ELECTRONIC COMMERCE (3).

BISI 6550. PROJECT MANAGEMENT & ANALYSIS (3). This course explores the techniques to successfully manage business projects. The topics covered include scope, time, cost, quality, human resource, communications, risk, integration and procurement management. The processes covered include initiating, planning, executing, controlling, and closing of projects. Students will have the opportunity to use current project management software.

BISI 6750. CONTEMPORARY INFORMATION TECHNOLOGIES (3). This course introduces students to current IT related issues, technologies, and business applications. The range of topics include diverse topics such as local area networks, wide area networks, expert systems, decision support tools, e-commerce, and supply chain management. Students will also develop simple business applications using popular business software. Upon completion of the course, the student will have a good understanding of the role of various technologies in organizations.

BISI 6800. STRATEGIC INFORMATION SYSTEMS (3). This course explores the relationship between organizational strategies and the use of information systems that support those strategies. Case studies of successful and unsuccessful information system implementations will be used to show the importance of aligning information systems to business strategy.

ECONOMICS

ECON 5000. FOUNDATION IN ECONOMICS AND FINANCE. (NOT FOR GRADUATE CREDIT) A basic study of macro and micro economic theory and corporate finance. Topics include fiscal & monetary policy, market structure, international trade, analytical techniques, capital budgeting, cost of capital, and financial planning. (4) Satisfies finance and economic MBA prerequisites. Prerequisites: ACCT 2120 or ACCT 5000.

ECON 6010. STATISTICAL METHODS. (3) Development and application of probability and inferential statistics. Topics covered include Z-tests, T-tests, multiple regression and correlation, analysis of variance, and time series analysis. Prerequisites: ECON 2040 and one computer application course or BISI 5000.

ECON 6110. MANAGERIAL ECONOMICS. (3) Application of economic theory to business decision making; emphasis is on profit objectives, measurement and forecasting demand, and costs. Prerequisite: ECON 2120 or ECON 5000 and ECON 2010.

ECON 6510. INTRODUCTION TO HEALTHCARE ECONOMICS & MANAGEMENT. (3) The purpose of this course is to provide students with the fundamental understanding of the core economic concepts that they will need to become successful managers in the healthcare industry. Topics will include demand and supply of healthcare services, economics of asymmetric information, health insurance, the concept of input and output in the healthcare sector, cost-benefit analysis, pricing issues, for-profit and not-for-profit hospitals' behavior, physician in the healthcare market, healthcare costs and its determinants, and the economics of individual health related behavior.

ECON 6520. ECONOMICS OF HEALTHCARE ORGANIZATION, REGULATION AND LEGAL ISSUES IN HEALTHCARE. (3) The purpose of this course is to introduce students to the structure of healthcare industry and healthcare delivery systems in the U.S. and economic analysis of regulatory and legal issues that have bearing on the healthcare sector. Special emphasis will be placed on the industrial organization aspect of healthcare service sector. Special topics may include medical malpractice, tort reform, HMO liability, public health insurance laws, Medicare, antitrust and competition, mergers and acquisitions, regulation of prices and investment, regulation of pharmaceutical industry, and outsourcing and regulation of international trade of healthcare products and services.

ECON 6600. ADVANCED TOPICS IN HEALTHCARE ECONOMICS AND MANAGEMENT. (3) The purpose of this course is to introduce students to the actual managerial practices in the healthcare industry. This course is entirely built upon case studies. About 20-25 case studies will be covered in this course. Cases will be based on a number of areas and may include cases in strategic management in healthcare, corporate healthcare efforts, managed care, health information systems, technology in healthcare industry, value-based purchasing of healthcare resources, quality of healthcare, pharmaceutical industry, drug pricing and development, cost containment and efficiency, organizational management in healthcare etc.

ECON 6610. ADVANCED TOPICS IN HEALTHCARE MANAGEMENT AND INSURANCE. (3) This course will focus on applied skills healthcare management and insurance that are required to excel in healthcare consultancy and policy-making related areas. Special topics will include public health insurance, MEDICARE, MECAID, insurance and disease management, insurance for long term care, financing healthcare facilities and capital accumulation, financing in pharmaceutical and biotechnology etc. This course will be using both textbooks and an extensive array of case studies.

ECON 6620. DIRECTED PROJECT IN HEALTHCARE ECONOMICS AND MANAGEMENT. (3) Any student willing to do a directed project in healthcare economics and management will have to meet and obtain prior approval from the Coordinator of the Healthcare Economics and Management concentration and the student must demonstrate that the directed project clearly pertains to the area of healthcare economics and management. A faculty member suitable for the project must be willing to serve as the mentor of the student. The student will be required to prepare an extensive case study, and present his/her work before the college faculty. This directed project will follow the model of a mini-master's thesis. (Recommended length of the case study: 30—35 pages.) If the case study pertains to a very important business area, the Coordinator of the concentration may choose to invite industry leaders and other experts to watch the students' presentation.

ECON 6630. INTERNATIONAL HEALTHCARE SYSTEMS AND DEVELOPMENT ISSUES. (3) The purpose of this course is to introduce students to the healthcare systems in other countries of the world. Special emphasis will put on the healthcare systems of European, Canadian and major developing areas. Students will be introduced to differences in payer-provider mechanisms across countries in the world and will also learn about different regulation and insurance systems. Students will be taught the relationship between health and development and the role that national health achievements play in economic development and growth across nations. This course will be particularly suitable for students who want to expand their understanding of international healthcare.

ECON 6640. OPERATIONS MANAGEMENT AND ECONOMICS OF HEALTHCARE DELIVERY SYSTEMS. (3) Health Care Delivery systems present many complex problems that could benefit from Operations research /management-type analysis and applications. (See Michael Carter, OR/MS Today, April 2002 issue). The Health Care Industry is a special service industry. It can only run and function efficiently when operations management techniques and methods are used for the design, the operations, and the management and control of its processes. Students will acquire all the necessary skills needed for the application of operations management methods and techniques in Health Care industries.

FINANCE

FINA 6300. MANAGERIAL FINANCE. (3) Refined techniques of analysis, optimal financing decision, theory and cases in general corporate finance. Prerequisite: FINA 3300.

MANAGEMENT

MGMT 5000. FOUNDATION IN MANAGEMENT AND MARKETING. (NOT FOR GRADUATE CREDIT) This course covers the principles of organizational structure; recruitment to, retention of, training, and motivation of persons in organizations; basic strategies for growth and success including product development and refinement; customer/client analysis; promotional programming; pricing and budgeting. Students will be prepared for advanced work in strategic management, organizational behavior, and marketing.

MGMT 6020. BEHAVIOR IN ORGANIZATIONS. (3) This course focuses on personal and interpersonal effectiveness within organizational environments. Emphasis is on development of individual skills in self-awareness, self-management, and relating to other individuals within small-group and organizational contexts. Students will assess their individual style of relating to others. The course is highly experiential, and is built around a variety of self-assessment instruments, experiential learning exercises, and small group activities. Covers such topics as sensory modalities, social perception, goal formulation, self-directed learning, interpersonal communication and influence, and the changing work contract. Optional topics may include the management of time, stress, health, conflict, and/or change. Prerequisite: MGMT 3010 or equivalent.

MGMT 6060. OPERATIONS MANAGEMENT. (3) An analysis of operations management concepts, tools, and practices as applied to manufacturing and service organizations. Emphasizes the use of operations strategy to gain competitive advantage. Covers areas such as process analysis and capacity planning, product design and process selection, facility location and layout design, supply chain management, enterprise resource planning, and e-operations. Prerequisites: ECON 2010 or BISI 5000.

MGMT 6110. BUSINESS STRATEGY AND THE ECONOMIC ENVIRONMENT. (3) Examines corporate and business strategy formulation and implementation through the use of case studies. Integrates knowledge of all the business functional areas for establishing and attaining organizational objectives for efficiency, effectiveness, and competitiveness. Students are challenged to think about the role of ethics and the global nature of the current business environment in decision making. Enrollment priority is given to MBA students in the last semester of their program. Prerequisites: All other core MBA courses.

MGMT 6220. PROCUREMENT MANAGEMENT. (3) This course presents the knowledge and insights into strategies, processes and operations of procurement. Contemporary issues include purchasing and outsourcing, supplier management, negotiation, information systems, inventory, performance measurement, and globalization. Prerequisite: MG606, MK 605, or consent of the instructor.

MGMT 6260. SUPPLY CHAIN MANAGEMENT. (3) Planning and design of systems for goods and service flows in supply chain. Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise resource planning (ERP) systems. Use of e-business in the integration, control, and execution of business processes in the supply chain. Prerequisite: MGMT 6060, ECON 6010.

MGMT 6500. INDEPENDENT RESEARCH. (1-3) This course is designed to develop research skills necessary to deal with complex managerial problems, as well as problems associated with other business disciplines, e.g., Accounting, Economics, Finance, Marketing, Quantitative Methods, and Real Estate and Urban Development. The student, faculty advisor, and whenever possible, an executive from an organization where the student is employed or has a particular interest, cooperatively develop a study to seek a solution to an identifiable problem or opportunity. Prerequisite: 20 credit hours of MBA course work and prior approval of instructor.

MARKETING

MKTG 6050. MARKETING MANAGEMENT. (3) An analytical, managerially oriented course emphasizing decision-making in the functional area of marketing. Management of the basic marketing functions. Case problems and marketing decision simulation. Prerequisites: ECCT 5000 & MGMT 5000 or ECCT 2110-2120, FINA 3300, MGMT 301, MKTG 3010.

MKTG 6100. LOGISTICS (3) The course provides a broad overview of logistics, with an emphasis on basic principles, concepts, and analytical tools involved in designing and planning. Contemporary issues include lean logistics, distribution channel's function, structure, and processes, collaboration and competition among channel members, global logistics, materials management, warehousing, transportation, and information systems. Prerequisite: MKTG 6050 or instructor's consent.

GRADUATE FACULTY

Richard L. Banham, Associate Professor
B.S., University of Utah, 1975; M.P.A., University of Texas, 1978; Ph.D., University of Texas, 1984; J.D., University of Texas, 1985

Linda Carr, Assistant Professor
B.B.A., 1978, Emory University; C.P.A. 1987, Ph.D., 1993, Georgia State University

Tilden J. Curry, Associate Professor and Dean, College of Business
B.A., 1964, Louisiana State University; M.C.P., 1966, University of Cincinnati; Ph.D., 1978, Florida State University

Dharmendra P. Dhakal, Assistant Professor
B.A., 1973, M.A., 1976, Tribhuvan University; M.S., 1984, Ph.D., 1991, Southern Illinois University

James A. Ellzy, Professor
B.S., 1967, Maryland State College, Princess Ann; M.S., 1969, Indiana University; Ed.D., 1974, Northern Illinois University

Phyllis Flott, Assistant Professor
B.S., 1984, M.B.A., 1987, Emporia State University; Ph.D., 1996, University of North Texas

John M. Hasty, Jr., Professor
B.E.E., 1961, Georgia Institute of Technology; M.B.A., 1969; Ph.D., 1973, Georgia State University

Robert D. Hayes, Professor
B.S., 1974, M.B.A., 1976, Middle Tennessee State University; Ph.D., 1986, University of Arkansas; C.P.A., 1977; C.M.A., 1982; Cn.F.C., 1994

Eva K. Jermakowicz, Professor
B.A., 1972, M.A., 1973, University of Warsaw; Ph. D., 1982, Warsaw Technical University

Joel K. Jolayemi, Associate Professor
B. Sci., 1977, M. Sci., 1980, University of Ibadan; M. Sci., 1983, Ph.D., 1985, Case Western Reserve University

Lewis Laska, Professor

B.S., 1969, Belmont College; J.D., 1972, Vanderbilt University; M.B.A., 1973, University of Tennessee at Nashville; Ph.D., 1978, George Peabody College

Kenneth T. Lea, Professor

B.S., 1965, M.B.A., 1972, Middle Tennessee State University; D.B.A., 1980, Louisiana Tech University

Xiaoming Li, Assistant Professor

B.E., 1993 Southeast University (China); M.S. 1997, Renmin University (China); M.S., 2000, Ph.D., 2003, Clemson University

Millicent Lownes-Jackson, Associate Dean

B.A., 1972, Fisk University; M.B.A. 1975, Ph.D. 1981, Vanderbilt University

Vaidotas Lukosius, Assistant Professor

B.E., 1996, Vilnius University (Lithuania); M.S., 1999, Helsinki University; Ph.D., 2003, New Mexico State University

Festus Olorunniwo, Professor and Chair of Business Administration

B.S., 1972, University of Lagos; M.S., 1978, Polytechnic University of New York; Ph.D., 1981, University of Texas at Austin

Achintya Ray, Assistant Professor

B.Sc., 1995, University of Calcutta; M.A., 1997, Delhi School of Economics; M.A., 2003, Vanderbilt University; Ph.D., 2004, Vanderbilt University

Stephen P. Shao, Associate Professor

B.A., 1976, University of Virginia; M.B.A., 1977, Old Dominion University; Ph.D., 1984, University of Maryland

Jeffrey S. Siekpe, Assistant Professor

B.S. (Honorary) 1992, University of Science & Technology Ghana; M.S., 1997, Norwegian University of Science & Technology; M.B.A., 1999, Ph.D., 2003, University of Texas—Pan American

Sharon V. Thach, Professor

B.A., 1967, Michigan State University; M.A., 1980, Southern Illinois University; Ph.D., 1987, Michigan State University

Abu Wahid, Professor

B.S., 1971, M.S., 1976, Jahanigaraagor University; M.A., 1980, Ph.D., 1989, University of Manitoba



COLLEGE OF EDUCATION

COLLEGE OF EDUCATION

Peter Edmund Millet, Ph.D., Dean

Office: 118 Clay (Education) Building (615) 963-5451

Christon Arthur, Ph.D., Interim Associate Dean

Office: 107 Clay (Education) Building (615) 963-2913

Judith Presley, Ph.D., Assistant Dean, Teacher Education and Student Services

Office: 112 Clay (Education) Building (615) 963-5468

Vision

The College of Education aspires to be a place where students at both initial and advanced levels explore current research as they prepare to become competent and caring professionals who are able to work effectively with diverse populations.

Further, the College of Education seeks to provide students with global education opportunities, to inspire them toward a demonstrated commitment to service for others, and to provide them with the knowledge, skills, and dispositions necessary to excel in their chosen professions.

Mission

The mission of the College of Education is to prepare teachers, counselors, psychologists, and administrators to work effectively with schools and communities.

Additionally, the college of Education provides all students with the technological skills, knowledge and commitment to diversity necessary for the provision of global and community service, and demonstration of professional excellence.

GOALS

1. To prepare elementary and secondary teachers, counselors, supervisors, administrators, school psychologists, counseling psychologists, special educators, and recreation workers, and wellness experts.
2. To provide opportunities for faculty and students to pursue research and its uses in solving the problems of education, mental and physical health.
3. To provide students with opportunities for knowledge and understanding of the multicultural society in which they live and their relationship and responsibility in such a society.
4. To provide a sound program of guidance and to work cooperatively with other departments and colleges of the University in implementing the program.

Graduate studies in the College of Education are designed to prepare students for service in a variety of educational settings. Graduates have obtained positions as administrators, curriculum coordinators, guidance counselors, school psychologists, organizational counselors, elementary and secondary teachers, physical education professionals, mental health specialists, special education teachers, and administrators of recreational services. Graduates are also finding job opportunities in government, industry, religion, business, community agencies, and higher education.

TEACHER EDUCATION AND STUDENT SERVICES

Judith Presley, Ph.D., Assistant Dean

Post-baccalaureate students who wish to obtain licensure as a teacher, guidance counselor, school psychologist, or K-12 school administrator should work closely with the Office of Teacher Education and Student Services. Further, it should be understood that though one can work simultaneously toward initial teacher licensure and a master's degree, they are separate issues, though related in some ways. Admission to the teacher education program is handled through the Office of Teacher Education, while admission to a graduate degree program is handled through the Office of Graduate Studies. Admission to teacher education requires a 2.75 GPA on the last degree earned. Admission should be sought after the first semester of coursework. The Praxis II examination pass rate for 2004-2005 is 98 percent. Office of Teacher Education and Student Services: Rm. 112 Clay Bldg., 615-963-5459. Teacher licensure candidates must pass their relevant Praxis II tests prior to registering for student teaching or practicum.

Administrator License Requirements

Administrator licensure requirements are established by the State Board of Education. The M.Ed. in Educational Administration is designed to provide candidates with courses necessary to achieve the Beginning Administrator License in Tennessee. The Ed.S. and Ed.D. may also be used to achieve an administrator license though the candidate must work with the department head or advisor to design an appropriate program of study. Aside from the requirements of the degree, candidates for licensure must take and pass the relevant Praxis exam.

DOCTORAL DEGREES

DOCTOR OF EDUCATION DEGREE (Ed.D.)

The Doctor of Education (Ed.D.) Degree provides professional training for careers in teaching, administration, and related educational services. The degree is offered in Curriculum and Instruction, and Educational Administration.

CURRICULUM DESCRIPTION

Each doctoral program in Education consists of a minimum of sixty (60) hours above the master's degree and is composed of the following components:

1. A general education core—18 hours
2. The major field of study—24 hours
3. Electives—12 hours
4. Dissertation—6-15 hours

Individual programs of study reflect student backgrounds, and career aspirations; therefore, some programs may be more than sixty (60) semester hours.

TRANSFER CREDITS

Students who have hours above the master's degree will be allowed to apply a maximum of 6 hours credit to the Doctor of Education degree. Credit for these 6 hours will be granted at the time the student advances to candidacy provided the hours are from a regionally accredited institution authorized to offer graduate work beyond the master's degree, the grade of "B" or above has been earned, and the hours are applicable to the student's Doctor of Education program. Credit will not be extended to include workshops, extension courses or short-term courses. In special circumstances, students may be allowed to transfer up to twelve (12) hours (e.g., student has two Master's).

Students admitted to an Ed.D. degree program who have been awarded the Ed.S. degree from accredited institutions may be granted full credit for a maximum of thirty hours if the hours are applicable to student's program. Students who have completed their Ed.S. degrees at other institutions must meet residency requirements and must take at least six (6) semester hours of major area courses at TSU. Students who transfer core courses from other institutions must have earned at least a "B" in each course. All post Master's Degree transfer hours (excluding the Ed.S.) applied to the Ed.D. must have been taken within the last ten (10) years.

RESIDENCY REQUIREMENT

Students in the Doctor of Education program must establish academic residency by completing a minimum of eighteen (18) hours over a period of four (4) academic year semesters or two (2) academic year semesters and two (2) summer registrations (2 sessions per one summer equals one registration).

GRADUATE ASSISTANTSHIPS

A limited number of graduate assistantships are available in the College of Education for students who have the Doctor of Education as their objective. These assistantships employ students as teaching, research, and administrative assistants. The appointments provide a stipend for twenty (20) hours of work each week. Tuition and maintenance fees are not waived; however, out-of-state tuition is waived.

DOCTORAL ADVISOR

During the student's first semester of enrollment, the Department Head appoints a departmental faculty person to serve as the student's advisor. This person advises the student concerning programmatic requirements and planning the program of study.

DOCTORAL COMMITTEE

After the student passes the Qualifying Examination, the Department Head, in consultation with the student, will nominate

three departmental faculty persons to the student's doctoral committee. A fourth member of the committee external to the student's department is appointed by the Dean of the Graduate School when the student begins work on the dissertation.

The doctoral committee advises the student concerning changes in the program of study, and execution of the dissertation.

ACADEMIC LOAD FOR DOCTORAL STUDENTS

Students who have made arrangements to pursue studies on a full-time basis may take twelve (12) hours per semester with the approval of the chair of their doctoral committee.

Students awarded graduate assistantships must take at least nine (9) hours per semester to fulfill the obligations of the assistantship.

ACADEMIC STANDARDS

Grades of "C" or lower cannot count toward the doctoral degree, nor does the grade of "C" or lower meet eligibility requirements for the Qualifying or Comprehensive Examinations.

CHANGE OF DOCTORAL MAJOR

If a student wishes to change from one major to another, both the current department and the prospective department must be aware of the possible change. The student who wishes to change majors must file with the Graduate School the following items:

1. A "Change of Program" form.
2. A letter of recommendation from the Head of the Current Department.
3. An "Admission Supplement of Doctoral Applicants" Form.

After these items are filed with the Graduate School, they are forwarded to the appropriate department. An admission committee in the department reviews the request. If desired, an interview with the student is arranged by the committee. After reviewing all materials the committee makes a recommendation concerning the requested change.

If the student has already passed the Qualifying Examination, the student must retake the "Major Field of Specialization" portion when the change of major involves changing from one department to another, and a new program of study must be submitted. If the Comprehensive Examination has been passed, another one in the student's new major field must be taken after the "Major Field of Specialization" portion of the Qualifying Examination has been passed and a program of study has been approved.

TIME LIMITATION FOR CREDITS

Credits earned more than ten (10) years prior to the student's graduation cannot be applied toward meeting requirements for the Doctor of Education degree. This limitation applies to all post-master's degree credit, excluding Educational Specialist study.

QUALIFYING EXAMINATION

The Qualifying Examination is an assessment instrument used in planning or modifying student programs. It is three (3) hours in length and covers the following areas:

1. Research Methods;
2. Statistics / Computer Applications;
3. Major Area of Specialization.

Excluding prerequisites, a student is eligible to take the Qualifying Examination after completing a minimum of twelve (12) hours and a maximum of twenty-one (21) hours (EDAD 7120 or EDCI 7120, and EDAD 7180 must be included in these hours) and maintaining a minimum grade point average of 3.0.

Students who have completed twenty-one (21) hours and have not taken the Qualifying Examination may not take additional courses, unless they are required prerequisites, without the written permission of the Dean of the College of Education. Courses taken without permission will not count in meeting degree requirements.

Performance on the Qualifying Examination is assessed by evaluation teams composed of faculty in the areas tested. Performance is assessed on a pass-fail basis. In the event of a failure, the evaluation team makes recommendations for remediation.

The student's Doctoral Advisor may recommend that the student be permitted to prepare for re-examination. In this event, the student and advisor, using the recommendations made by the evaluation team, will plan a program of study including independent study, additional course work, or both.

The student may take the Qualifying Examination a maximum of three (3) times. A third failure of any portion of the examination will result in the student's dismissal from the doctoral program.

CANDIDACY

A student is admitted to candidacy after the successful completion of the Qualifying Examination and submission of an approved program of study to the Dean of the Graduate School.

COMPREHENSIVE EXAMINATION

The Comprehensive Examination is a twelve (12) hour written examination administered in six hour blocks on two consecutive Saturdays. A candidate may not enroll in Dissertation until the semester following the one in which the Comprehensive Examination is passed.

A doctoral candidate is eligible to take the Comprehensive Examination when the following criteria have been met:

- a. Qualifying examination passed;
- b. Seventy-five (75) percent of major field and seventy-five (75) percent of electives completed;
- c. All core requirements completed;
- d. Written approval from the candidate's committee chairperson received;
- e. A 3.0 grade point average maintained.

RE-EXAMINATION FOR THE COMPREHENSIVE EXAMINATIONS

In the event a student fails the Comprehensive Examination, or sections of it, the doctoral committee may recommend that the candidate be permitted to prepare for re-examination. In this event, the student and major advisor will plan a program of study, including independent study, further course work, or both. The student's credit hour requirements may thus be extended.

A student may take the Comprehensive Examination a maximum of three (3) times. A third failure by a candidate shall result in the student's dismissal from the doctoral program.

DISSERTATION

Upon the successful completion of the comprehensive examination and all course work, the student is eligible to begin work on the dissertation. The initial step shall be the development of a proposal to be circulated to the student's doctoral committee. Approval of the proposal shall constitute formal approval to pursue the research project described therein.

After the first enrollment in dissertation credit, the student shall continue to enroll (fall, spring, summer) in dissertation credit until the dissertation is completed and accepted by the Graduate School. Students will pay the usual fees and tuition for dissertation research until they have earned a maximum of fifteen (15) hours of credit. After earning fifteen hours credit, students pay a flat fee for additional enrollments in dissertation research. Students must enroll for at least two semesters of dissertation research.

In addition to the writing style required by the student's department, the student must follow the regulations governing style and format established by the Graduate School in Guidelines for the Preparation of Dissertations, Theses, Projects and Course Papers. Failure to do so could result in extensive costly revisions.

Upon completion of the dissertation, the defense of the dissertation will be scheduled. The oral defense of the dissertation is publicized in advance and open to the public. The discussion of the outcome of the defense, however, is between the candidate and his/her committee.

DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

The Doctor of Philosophy (Ph.D.) degree is offered in Psychology. Information presented above regarding the Ed.D. degree is also applicable to the Ph.D. degree in Psychology with the exception of the residency requirement and the curriculum. Please refer to the departmental section of this Catalog for details of these programs.

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

Janet M. Finch, Ph.D., Head
Office: 103 Clay (Education) Building
(615) 963-2299

The graduate programs in the Department of Educational Administration lead to the Doctor of Education Degree in Administration and Supervision with concentrations in PreK-12

Administration and Supervision and Higher Education Administration, the Educational Specialist degree in Educational Administration, and the Master of Education Degree in Administration and Supervision.

MAJOR: ADMINISTRATION AND SUPERVISION
DEGREE: DOCTOR OF EDUCATION (Ed.D.)
CONCENTRATIONS: PreK-12 Administration and Supervision, Higher Education Administration

Admission Requirements:

1. A minimum Graduate Record Exam (GRE) score of 900 (Verbal and Quantitative), or a minimum Miller Analogies Test (MAT) score of 402, are normally required for admission.
2. A minimum GPA of 3.25 is required on the last graduate degree, either Master's or Education Specialist. No more than thirty (30) semester hours from an Ed.S. degree may be used toward the doctorate. The advisor will recommend the appropriate Education Specialist credits to be transferred.
3. An acceptable work experience record.
4. Four (4) letters of recommendation indicating probable success in the program.
5. Proof of the ability to write effectively.
6. An acceptable interview.

The admissions committee will review and evaluate the entire academic and professional record in making the admissions decision. Equal weight will be given to: (a) previous graduate GPA, (b) GRE or MAT scores, (c) other variables listed above. Applicants whose standardized test scores are below those normally expected for admission will be considered for admission to these programs if: (1) the overall record (based on the above variables) indicates high potential for success in doctoral study, and (2) the applicant's overall potential for success in the program is judged to be comparable to that of the other applicants in the admissions cycle.

All application materials must be submitted to the Graduate School by these priority application deadlines.

Fall semester	July 1
Spring semester	November 1
Summer session	April 1

Degree Requirements

A minimum of sixty (60) semester hours of approved course work beyond the Master's degree is required: eighteen (18) semester hours of general education core, twenty-four (24) semester hours of courses within the concentration, twelve (12) hours of electives, and six to fifteen (6-15) semester hours of credit for the satisfactory completion of the doctoral dissertation. Also required is the successful completion of a written qualifying examination, a written comprehensive examination, and residency of a minimum of eighteen (18) semester hours over a period of four (4) semesters.

There are two concentrations within the Administration and Supervision major: Pre-K-12 Administration and Supervision and Higher Education Administration. The General Education Core remains similar in both Concentrations.

PROGRAM OF STUDY:

General Education Core (18 Semester Hours)

EDAD 7040	Leadership and Interpersonal Relationships	3
EDCI 6300	Multicultural Education	3
EDCI 7000	Foundations of Education	3
EDAD 7120	Advanced Methods of Educational Research	3
EDCI 7450	Learning Theories for Educators	3
EDAD 7180	Statistical Analysis in Educational Leadership II	3
*EDAD 7400	Foundations of Higher Education	3

*EDAD 7400 replaces EDCI 7000 for Higher Education concentration

Major Core for Each Concentration (6 Semester Hours)

EDAD 7010	Theory and Principles of Ed. Adm.	3
EDAD 7150	Advanced Legal Problems	3

Concentration PreK-12 Administration and Supervision (18)

EDAD 7080	Internship in Admin./Supervision	3
EDAD 7090	Seminar in Admin./Supervision	3
EDAD 7070	Planning For Educational Change	3

Take one of the following three courses.

EDAD 7020	Policy Implementation in Ed. Admin.	3
EDAD 7060	Administration of Inst. Prog. And Materials	3
EDAD 7200	Human Resource Administration	3

Take two of the following courses.

EDAD 7050	Professional Negotiations	3
EDAD 7280	Business Management & Transportation	3
EDAD 7300	Communication for School Executives	3

Dissertation (6—15 hours required)

EDAD 8100	Doctoral Dissertation	6-15
Minimum Required hours for the Ed.D.		60

Concentration Higher Education (21 hours required)

EDAD 6170	Organization & Admin. of Higher Ed.	3
EDAD 7430	Seminar in Higher Education	3
EDAD 7440	Practicum in Higher Education	3
EDAD 7420	Curriculum, Students, and Fac. in Higher Ed.	3
EDAD 7450	Economics and Finance in Higher Education	3

Take one (1) of the following courses:

EDAD 7130	The Community College	3
EDAD 7410	Diversity in Higher Education	3
EDAD 7460	Public Policy in Higher Education	3
EDAD 7470	Topics in Higher Education	3
Electives (12 semester hours)		12

Dissertation (6—15 hours required)

EDAD 8100	Dissertation Writing	<u>6-15</u>
Total Degree Requirement		60

Once students begin the dissertation, they must register for EDAD 8100 every semester until the dissertation is completed. After the fifth registration, students register in "Dissertation Continuation" (section 35), at a reduced fee.

If not currently licensed as a principal/supervisor in Tennessee, some of the above doctoral courses may apply toward licensure. Interested students must see the Department Head of Educational Administration at the beginning of their doctoral program to work out the licensure requirements.

MAJOR: ADMINISTRATION AND SUPERVISION
DEGREE: EDUCATIONAL SPECIALIST (Ed.S.)

Admission Requirements

1. Master's degree from an accredited institution.
2. A minimum Graduate Record Exam (GRE) score of 800 (Verbal & Quantitative), or a minimum Miller Analogies Test (MAT) score of 393.
3. A minimum G.P.A. of 3.25 on the last graduate degree. (If the graduate degree is not in educational administration, or a related area, the student will be required to have a total of nine (9) hours of prerequisites in educational administration at the master's level.)

The admissions committee will review and evaluate the entire academic and professional record in making the admission decision. Consideration will be given to (a) previous graduate GPA and (b) GRE or MAT scores. Applicants whose standardized test scores are below those normally expected for admission, which may result in their admission being denied, will be given further consideration or admission to the Ed.S program if the student provides the following: (a) an acceptable work record (a resume or curriculum vita), and (b) three (3) written recommendations indicating probable success in the program, and (c) a writing sample that will be scheduled through the department.

The above variables will be evaluated to determine the applicant's overall potential for success in the program.

Degree Requirements

A minimum number of thirty-three semester hours are required for the Educational Specialist Degree. The Program of Study must be submitted after completion of at least nine (9) semester hours, but no more than fifteen (15) semester hours. Grades of "C" or lower cannot count toward the degree. The Ed.S. Degree requires a three (3) hour written comprehensive examination over the major area as well as a culminating project (EDAD 6140).

Required Courses 18 Hours

EDAD 6000	Statistical Analysis in Educational Leadership I	3
EDAD 6040	Leadership	3
EDAD 6070	Legal Problems	3
*EDAD 6080	Internship in Administration & Supervision	3
EDAD 6280	Financial Management and Administration	3
EDAD 6140	Culminating Project (should be taken in last semester of program)	3

(*To be taken at the end of the program)

Select 15 Hours from the Following:

EDAD 6010	Organizational Theory and Behavior	3
EDAD 6050	Professional Negotiations	3
EDAD 6060	Administration of Instructional Programs	3
EDAD 6090	Planning for Educational Facilities	3
EDAD 6100	Computer Applications for Educational Leaders	3
EDAD 6110	Human Resource Management and Dev.	3
EDAD 6150	Ethics in School Administration	3
EDAD 6160	School Principalship	3
EDAD 6250	International/Global Education	3
EDAD 6300	Communication for School Executives	<u>3</u>
Total Degree Requirement		33

MAJOR: ADMINISTRATION AND SUPERVISION
DEGREE: MASTER OF EDUCATION (M.Ed.)

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. The student must remove conditional status in the first nine hours of graduate courses; failure to do so will result in dismissal from the program.

The admissions committee will review and evaluate the entire academic and professional record in making the admission decision. Equal weight will be given to (a) previous graduate GPA and (b) GRE or MAT scores. Applicants whose standardized test scores are below those normally expected for admission, which may result in their admission being denied, will be given further consideration for admission to the M.Ed. program if the student provides the following: (a) an acceptable work record (a resume or curriculum vita), and (b) three (3) written recommendations indicating probable success in the program, and (c) a writing sample that will be scheduled through the department.

The criteria listed above will be evaluated to determine the applicant's overall potential for success in the program as compared to other applicants in the admissions cycle.

Degree Requirements

Candidates for the M.Ed. degree must take a minimum of 33 hours of course work and pass comprehensive examinations in the field of general education and educational administration. Substitutions may be made only with the recommendation of the advisor.

PROGRAM OF STUDY (Licensure in K-12 Administration and Supervision)

Each student must be interviewed by a committee of professional administrators prior to admission, or during the first semester of study in this program. (Each student must inform his or her advisor early in the program that Principal/Supervisor licensure is being sought.)

Core—12 hours

PSYC 5430	Advanced Educational Psychology	3
EDCI 6100	Curriculum Planning and Programs	3
EDAD 5020	Philosophy & Introduction to Ed.Adm.	3
EDAD or EDCI 5110	Educational Research for the Practitioner, or Research & Statistics	<u>3</u>
		12

Required Courses—18 hours

EDAD 5030	Instructional Leadership	3
EDAD 5050	Educational Law	3
EDAD 5515	Administrative Internship I	1
EDAD 5516	Administrative Internship II	1
EDAD 5517	Administrative Internship III (taken near the end of the program)	1
EDAD 5640	Social and Political Issues in Education	3
EDAD 5720	School Finance	3
EDAD 6090	Planning for Educational Facilities	3
		18
Electives		<u>3</u>
Total		33

PROGRAM OF STUDY (Non-licensure)

This curriculum is for those who do not intend to apply to the State of Tennessee for a principal license.

Core—12 Hours

PSYC 5430	Advanced Educational Psychology	3
EDCI 6100	Curriculum Planning & Programs	3
EDAD 5020	Philosophy & Introduction to Ed.Adm.	3
EDAD or EDCI 5110	Educational Research for the Practitioner, or Research and Statistics	<u>3</u>
		12

Required Courses—15 hours

EDAD 5030	Instructional Leadership	3
EDAD 5050	Educational Law	3
EDAD 5640	Social and Political Issues in School Communities	3
EDAD 5720	School Finance	3
EDAD 6090	Planning for Educational Facilities	<u>3</u>
		15
Electives		<u>6</u>
Total		33

COURSE DESCRIPTIONS

EDUCATIONAL ADMINISTRATION

EDAD 5020. PHILOSOPHY AND INTRODUCTION TO SCHOOL ADMINISTRATION. (3) A general course designed to develop insight into the philosophy, history, and organization of schools.

EDAD 5030. INSTRUCTIONAL LEADERSHIP. (3) Designed to develop understanding of basic theories of supervision and supervisory procedures for improving instructional services.

EDAD 5040. THE ADULT LEARNER. (3) This course is designed to (a) investigate the various problems related to adult learning; (b) enable students to acquire an understanding of different learning patterns of adults; (c) identify similarities and differences compared with the learning of youth; (d) understand how adult educators, through research and practice, are approaching solutions for these problems, and (e) understand how adult education programs are designed to serve the differentiated needs and uniqueness demanded by the adult learning situation.

EDAD 5050. EDUCATIONAL LAW. (3) A study of legal principles that relate to such matters as authority, responsibility, and liability of school boards, districts, and state and federal organizations. The legal and ethical status of principals and teachers is also considered.

EDAD 5070. STRESS MANAGEMENT FOR ADMINISTRATORS. (3) Management of today's schools results in increased stress upon educational leaders. Vital to successful teaching and administering is a knowledge of techniques for stress management.

EDAD 5110. EDUCATIONAL RESEARCH FOR THE PRACTITIONER. (3) A course designed to introduce the student to different methods for conducting educational research. The course emphasizes methodology, analysis, and interpretation of data. Also, technology as it applies to school administration is emphasized.

EDAD 5180. PRINCIPLES AND TECHNIQUES FOR TEACHING ADULTS. (3) This course is designed to provide a sound background from research data about the principles, methodology and instructional competencies which underlie the areas referred to as Adult Education. These areas include: (a) teaching basic skills to adults; (b) teaching adults to develop new insights, attitudes, skills and habits; (c) teaching adults to develop new skills and habits for utilizing leisure-voluntary and force; (d) teaching the adult to develop positive attitudes toward an acceptance of aging, illnesses and death; and (e) teaching adult citizens skills of thinking and learning, group dynamics and functional democracy.

EDAD 5350. PARENTAL INVOLVEMENT EDUCATION. (3) This course is designed for those educators who deal with parental involvement in education.

EDAD 5390. COMMUNITY RESOURCES. (3) This course is a study of the relationships between schools and communities. This course may be used for EDAD 5640.

EDAD 5420. COMMUNITY ORGANIZATION. (3) This course is designed to introduce the principles and practices of community organization with emphasis on urban communities. This course may be substituted for EDAD 5640.

EDAD 5490. ASPECTS OF AGING. (3) Chief concern is with providing a basic understanding of the biological and psychological aspects of aging. Current theories of aging are also examined.

EDAD 5515. ADMINISTRATIVE INTERNSHIP I. (1) The first section of a systematic study and analysis of the work of a principal or supervisor in a given school situation through seminar and field experiences. The student will learn how to develop and prepare a portfolio for licensure and employment purposes. This course should be taken in the first semester of enrollment for students seeking administrative licensure.

EDAD 5516. ADMINISTRATIVE INTERNSHIP II. (1) The second section of a systematic study and analysis of the work of a principal or supervisor in a given school situation through seminar and field experiences. The student will continue to prepare his/her professional portfolio and it will be evaluated in this course. This course should be taken in the second semester of enrollment for students seeking administrative licensure.

EDAD 5517. ADMINISTRATIVE INTERNSHIP III. (1) The third section of a systematic study and analysis of the work of a principal or supervisor in a given school situation through seminar and field experiences. The student will complete the professional portfolio. A final evaluation of the portfolio will take place. This course should be taken in the third semester of enrollment for students seeking administrative licensure.

EDAD 5640. SOCIAL AND POLITICAL ISSUES IN SCHOOL COMMUNITIES. (3) Explores the purpose and function of politics at the local, state,

and national levels as they affect public education. This is a school-community relationship course.

EDAD 5720. SCHOOL FINANCE. (3) A consideration of the financial support of elementary and secondary education, involving sources of income, methods of finance, and expenditures. The school finance problems of the local administrator are given special attention.

EDAD 5910, 5920, 5930. PROBLEMS AND PROJECTS IN EDUCATION. (3) These are individual study courses and require special permission to sign up.

EDAD 6000. STATISTICAL ANALYSIS IN EDUCATIONAL LEADERSHIP I. (3) This course offers training in the use of statistical tools for use in research and in understanding scientific literature. Emphasis is on inferential statistics. Prerequisite: Elementary statistics, e.g., as covered in EDAD 5110.

EDAD 6070. LEGAL PROBLEMS. (3) Studies the legal facets of personnel administration in schools.

EDAD 6090. PLANNING FOR EDUCATIONAL FACILITIES. (3) Emphasizes trends in school planning, designing, constructing, modernizing, and utilizing facilities.

EDAD 6100. COMPUTER APPLICATIONS FOR EDUCATIONAL LEADERS. (3) The course is designed to provide administrators, supervisors, and teachers with a basic understanding of the potential uses of the computer in administration.

EDAD 6110. HUMAN RESOURCE MANAGEMENT AND DEV. (3) Emphasizes the place of formative and summative evaluation in the responsibilities of school administrators. Various evaluation instruments and techniques will be analyzed and discussed.

EDAD 6120. ASSESSMENT FOR PROFESSIONAL LICENSURE. (3-6) This course is for those seeking professional/administrator licensure. The requirement for this course will be met by working with a practicing administrator in an on-site school situation for one semester.

EDAD 6140. CULMINATING PROJECT FOR ED. S. (3) In this course students produce a written research project on a topic related to educational administration.

EDAD 6150. ETHICS FOR SCHOOL ADMINISTRATORS. (3) A general course to explore the ethical implications of being a school leader and administrator.

EDAD 6160. SCHOOL PRINCIPALSHIP. (3) Designed for administrators and teachers who desire to study purposes, practices, and trends in elementary school administration.

EDAD 6170. ORGANIZATION AND ADMINISTRATION OF HIGHER EDUCATION. (3) This course is designed to study patterns of organization and governance with an emphasis on basic management principles associated with the administration of institutions of higher education.

EDAD 6200. ORGANIZATION AND ADMINISTRATION OF THE SECONDARY SCHOOL. (3) This course is designed to assist students in acquiring and/or increasing their knowledge concerning the many facets of the principal's role in the secondary schools. The course will emphasize the findings of research pertaining to the building of effective schools and how this research can be implemented by principals to improve the quality of schools.

EDAD 6250. INTERNATIONAL GLOBAL EDUCATION. (3) This course compares and contrasts the philosophy, course content, methodology and management styles of school systems of various countries.

EDAD 7000. INTERDEPARTMENTAL DOCTORAL SEMINAR. (3) This course is designed to assist doctoral students in writing the dissertation proposal.

EDAD 7010/6010. THEORY AND PRINCIPLES OF EDUCATIONAL ADMINISTRATION. (3) A study of current theory and principles of educational administration.

EDAD 7020. POLICY IMPLEMENTATION IN EDUCATIONAL ADMINISTRATION. (3) A course to prepare students to develop and implement administrative policy in education at the local, state, and national levels. Forces which shape the thinking of policymaking bodies are emphasized. Also, the considerations necessary for effective formulations and imple-

mentations of policy in educational administration and supervision are analyzed.

EDAD 7030. QUALITATIVE-NATURALISTIC AND SURVEY RESEARCH METHODS. (3) This course emphasizes the methodology involved in the development and implementation of naturalistic methods of research.

EDAD 7040/6040. LEADERSHIP AND INTERPERSONAL RELATIONS FOR ADMINISTRATORS. (3) This course examines the role, style, and function of a leader in the context of education. Theories of leadership styles are addressed.

EDAD 7050/6050. PROFESSIONAL NEGOTIATIONS IN EDUCATION. (3) This course explores the background and rationale for negotiations and bargaining in education. The major emphasis is on the realities and practical sides of the negotiation process itself.

EDAD 7060/6060. THE ADMINISTRATION OF INSTRUCTIONAL PROGRAMS AND MATERIALS. (3) Practices and processes used by administrative and supervisory leaders who plan, organize, and coordinate the professional activities of teachers in improving learning experiences are studied.

EDAD 7070. PLANNING FOR EDUCATIONAL CHANGE. (3) This course includes strategic and operational planning, utilization of human resources, organizational development, financial resources, and the budgetary process in planning. Stress and change in education, and possible scenarios for the educational future are also covered.

EDAD 7080/6080. INTERNSHIP IN ADMINISTRATION/SUPERVISION. (3) Involves simulated exercises and workshop experiences, as well as on-the-job released-time experiences in cooperation with surrounding schools. Prerequisites: 15 hours in Administration and Supervision. This course is taken near the end of the degree program.

EDAD 7090. SEMINAR IN EDUCATION ADMINISTRATION AND SUPERVISION. (3) A series of activities designed to integrate learning. Prerequisites: Nine semester hours in Administration and Supervision and admission to Ed.D. Program. This course is taken near the end of the program.

EDAD 7100. CURRENT ISSUES IN EDUCATIONAL ADMINISTRATION (3) A course designed to insure that students are familiar with issues and trends in school administration and able to understand and evaluate the potential use and application of those which are appropriate.

EDAD 7110. SCHOOL DISTRICT ADMINISTRATION. (3) This course focuses on readings, discussion and problem solving in areas of school administration that primarily concern the board of education, the superintendent of schools, and the central office.

EDAD 7120. ADVANCED METHODS OF RESEARCH. (3) A course designed to teach methods of educational research.

EDAD 7130/6130. THE COMMUNITY JUNIOR COLLEGE. (3) This course is designed to give the student an overview of both the administration and curriculum of the community college.

EDAD 7150. ADVANCED LEGAL PROBLEMS. (3) Involves the study of legal problems encountered by school administrators. Methods of conducting legal research are employed. Prerequisites: Nine semester hours in Administration and Supervision.

EDAD 7180. STATISTICAL ANALYSIS IN EDUCATIONAL LEADERSHIP II. (3) This course emphasizes the use of computers in education, especially educational administration. The focus is the use of statistical analysis packages and the application of computers to research and educational problems. Prerequisite: EDAD 6000 or equivalent.

EDAD 7200. HUMAN RESOURCE ADMINISTRATION. (3) Emphasis is placed upon personnel policies and practices in schools and communities. Consideration is given to pupil-teacher, teacher-principal, principal-staff problems, and the interrelationships of these persons to each other and the community.

EDAD 7280/6280. FINANCIAL MANAGEMENT AND ADMINISTRATION. (3) This course is primarily concerned with fiscal management at the central office level, emphasizing the responsibilities of the director and the business manager. Logistical support services, especially transportation, the lunch program, maintenance, and operations will also be included.

EDAD 7300/6300. COMMUNICATION FOR SCHOOL EXECUTIVES. (3)

This course reviews basic communication theory as a prelude to exploring the varied means of communication used by school administrators.

EDAD 7350. DECISION MAKING FOR ADMINISTRATORS. (3) This course emphasizes the analytical approach to decision making for school administrators.

EDAD 7400. FOUNDATIONS OF HIGHER EDUCATION. (3) This course serves as an introduction to the historical, sociological, philosophical, and cultural foundations of higher education. Theoretical and methodological perspectives on inquiry in higher education as both a field of study and an arena for professional practice will also be explored.

EDAD 7410. DIVERSITY AND HIGHER EDUCATION. (3) Diversity and Higher Education examines issues of diversity in colleges and universities from varied perspectives, including institutional; pedagogical; methodological; gender, race/ethnicity and class; and policy.

EDAD 7420. CURRICULUM, STUDENTS, AND FACULTY IN HIGHER EDUCATION. (3) Curriculum, Students, and Faculty in Higher Education examines the nature and characteristics of resources including the American college student, the professional, the curriculum as well as the curriculum. National data sources and professional literature will be used. Policy, services, procedures, and rights in the systems of higher education will be examined.

EDAD 7430. SEMINAR IN HIGHER EDUCATION. (3) Seminar in Higher Education focuses on advanced understanding of scholarship and professional practice in the field of higher education. Students review literature and develop text and presentations based on their inquiries of the literature. All other required courses with a higher education focus are prerequisites as well as approval of the instructor.

EDAD 7440. PRACTICUM IN HIGHER EDUCATION. (3) Practicum in Higher Education provides for field experience in administrative, academic and/or research placements in post-secondary settings. Funding, budgeting, program creation and implementation and tuition concerns are topics that will be explored in this course.

EDAD 7450. ECONOMICS AND FINANCE OF HIGHER EDUCATION. (3) Economics and Finance of Higher Education examines the economic context and fiscal management of higher education.

EDAD 7460. GOVERNMENT, PUBLIC POLICY, AND HIGHER EDUCATION. (3) This course focuses on the nature of relationships of government and public policy to post-secondary education. Issues of government relations and policy formulation and implementation as they relate to higher education are explored.

EDAD 7470. CONTEMPORARY TOPICS IN HIGHER EDUCATION. (3-9) Contemporary Topics in Higher Education focuses on issues and topics of current relevance in higher education. Topics vary and reflect what is of current and recurrent importance in the field of higher education.

EDAD 8100. DOCTORAL DISSERTATION. (6-15) Successful completion of a doctoral dissertation is required of all doctoral candidates. A minimum of six (6) hours is required for graduation, but enrollment is limited to three (3) hours per semester. Permission of the major professor is required. Students must pay the full fee for 15 semester hours; a reduced fee becomes effective after enrolling for 15 semester hours, at this time students enroll in section 35.

EDAD 8110. READINGS AND RESEARCH IN EDUCATIONAL ADMINISTRATION. (3-6) This course is designed as a special readings course. A maximum of 6 hours may be used for the degree. Students must have completed all course work and be ready for EDAD 8100. The class prepares students for their Proposal Hearing. Prerequisite: Successful completion of the Comprehensive Examination.

GRADUATE FACULTY

Christon Arthur, Associate Professor and Interim Associate Dean

B.A., 1989, Caribbean Union College; M.A., 1995, Ed.S., 1998, Ph.D., 2000, Andrews University.

Robert L. Boone, Professor

B.S., 1970, M.A. Ed., 1974, Tennessee State University; Ph.D., 1983, George Peabody College.

Joe L. Cornelius, Professor

B.S., 1968, M.A., 1969, Tennessee State University; Ed.D., 1977, University of Tennessee/Knoxville.

Eleni D. Coukos, Assistant Professor

B.A., 1985, University of Mary Washington; M.Ed., 1998, Virginia Commonwealth University; Ed.D., 2002, Florida Atlantic University.

Denise Dunbar, Associate Professor

B.S., 1974, Northern Illinois University; M. Ed., 1983, George Peabody College at Vanderbilt University; Ed.D., 1989, George Peabody College at Vanderbilt University.

Janet M. Finch, Professor

B.S., 1972, M.A., 1978, Tennessee State University; Ph.D., 1985, George Peabody College of Vanderbilt University.

Kirmanj Gundi, Associate Professor

B.S., 1986, Tennessee State University; M.Ed., 1994, Tennessee State University; Ed.D., 1998, Tennessee State University.

Wayne C. Guyette, Professor

B.S., 1973, University of Nevada at Las Vegas; M.S., 1977, Florida International University; Ph.D., 1979, Florida State University.

Paula Short, Professor

B.A., 1967, University of North Carolina at Greensboro; M.Ed., 1970, University of North Carolina at Chapel Hill; Ph.D., 1983, University of North Carolina at Chapel Hill.

Karen Leigh Stevens, Associate Professor

B.A., 1977, Belmont College; M.Ed., 1988, Belmont College; Ed.D., 1997, Vanderbilt University.

Eric Vogel, Professor

B.A., 1971, Louisiana State University at New Orleans; M.Ed., 1974, University of New Orleans; Ph.D., 1983, Florida State University.

Roger W. Wiemers, Associate Professor

B.A., 1992, International Bible Seminary; M.Ed., 1995, Ed.D., 1998, Tennessee State University.

DEPARTMENT OF HUMAN PERFORMANCE AND SPORT SCIENCES

Catana R. Starks, Ed.D., Interim Head
Office 332 Gentry Center
(615) 962-5581

MAJOR: HEALTH, PHYSICAL EDUCATION AND RECREATION

**CONCENTRATIONS (2):
Exercise Science
Sport Administration**

DEGREE: MASTER OF ARTS IN EDUCATION (M.A.Ed)

NOTE: A COMBINED PROGRAM FOR MASTER OF ARTS IN EDUCATION TO TEACH PHYSICAL EDUCATION WILL BE OFFERED IN CONJUNCTION WITH TEACHER EDUCATION.

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative GPA of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the GRE or a score of 370 on the MAT.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that the submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program. Candidacy cannot be attained until the full requirements for unconditional admission are met.

At least eighteen (18) hours of prerequisite study in Health, Physical Education, Recreation or a closely related field must be completed prior to admission to the program.

Degree Requirements

1. The M.A.Ed. Degree requires a minimum of thirty (30) semester hours of study including nine (9) hours of Major Core courses, and nine to fifteen (9 to 15) hours of Concentration Core courses. The remaining hours may be selected from departmental electives, Thesis, Project, or other course work selected with the approval of the students' advisor.
2. Students who elect to write a thesis or project are encouraged to enroll in HPSS 5120 or HPSS 6020 at least one se-

mester prior to the semester in which they intend to complete work for the degree.

3. Students who choose the non-thesis option must pass a comprehensive examination prior to graduation.
4. Students must maintain a cumulative 3.0 GPA or better to remain in good standing.

EXERCISE SCIENCE

Major Core—(9 hours)

EDAD 5110	Research and Statistics	3
HPSS 5050	Sports and School Law	3
HPSS 5130	Tech. Cog. & Kin. App.	3

Concentration Core—(9 hours)

HPSS 5010	Intro. to Epidemiology	3
HPSS 5350	Adv. Exercise Physiology	3
HPSS 5370	Fitness Eval. & Assessment	3

Electives—as Approved by Advisor¹—12 hours

Minimum Number of Hours²: 30 hrs

SPORT ADMINISTRATION

Major Core—(9 hours)

EDAD 5110	Research and Statistics	3
HPSS 5050	Sports and School Law	3
HPSS 5130	Tech. Cog. & Kin. App.	3

Concentration Core—(9 hours + Field Experience)

HPSS 5500	Problems in Sport Management	3
HPSS 5510	Financial Administration of Sport	3
HPSS 5800	Strategic Management	3

Field Experience—(3 hrs min—6 hrs max)

HPSS 5920	Administrative Practicum and/or	3-6
HPSS 5930	Internship	3-6

Electives—as Approved by Advisor¹—6 to 9 hours

Minimum Number of Hours²: 30 hrs

Notes:

1. Other courses may be selected with the approval of the departmental advisor.
2. Option of one of the following: Comprehensive Exam, Thesis, or Project

COURSE DESCRIPTIONS

HPSS 5010. INTRODUCTION TO EPIDEMIOLOGY (3) This course is designed to study factors influencing health and disease in a population. Relationships between host and environment will also be studied. Application of the principles of epidemiologic methods and data will be collected, investigated, analyzed, and interpreted with an emphasis on prevention and control.

HPSS 5050. SPORTS AND SCHOOL LAW (3) Development of administrative considerations and methods from the legal perspective influenced by statutes and contemporary litigation.

HPSS 5120. THESIS WRITING (3) Designed to assist students in the selection and adequate conduct of research problems in the area of health education, physical education, or recreation. Credit is given upon completion of the research problem and the passing of the oral examination.

HPSS 5130. TECHNIQUES OF COGNITIVE & KINETIC APPRAISAL (3) Designed to acquaint the student with the role of tests and measurement in a total program of physical education.

HPSS 5230. LEISURE IN AMERICAN SOCIETY (3) The nature, significance, and extent of recreation and leisure in a community are stressed. Principles, techniques, and skills needed in organizing and promoting leisure-time activities for home, school and community are included in the experience. Those essential elements pertaining to all recreational programs, such as leadership, areas and facilities, program finances, and recruiting of recreation workers, are covered in the content of the course. Opportunities are afforded students to experience actual recreation and leisure work and responsibility through visitations to selected agencies.

HPSS 5310. AGING & WELLNESS (3) Exploration of the social, cognitive, affective and physiological processes in humans and aging. Attention will be given to family and social dynamics, accommodations for disabilities, and legal / financial issues.

HPSS 5320. WELLNESS FOR SPECIAL POPULATIONS (3) Provides the professional with an understanding of theoretical and applied aspects of wellness programming for special populations, and their functional capacity with regard to wellness programming.

HPSS 5330. SPORTS PSYCHOLOGY (3) Surveys current psychological research and interventions for human performance including social facilitation, aggression, and motivation.

HPSS 5350. ADVANCED EXERCISE PHYSIOLOGY (3) Regulation and adjustment of physiological systems during acute exercise and adaptations to chronic exercise in various populations and environments; emphasizes discussion intended to reinforce principles of physiological phenomena and underlying mechanisms.

HPSS 5360. BODY COMPOSITION & ASSESSMENT (3) Laboratory and field assessment of body fat, lean body mass and somatotype, anthropometry; body build and composition; exercise and dietary regulation of obesity and chronic underweight.

HPSS 5370. FITNESS EVALUATION & PRESCRIPTION (3) Application of physiological assessment techniques to evaluate human performance; interpretation of results, and recommendation for corrective remediation protocols.

HPSS 5400. ATHLETIC INJURY & EVALUATION (3) Comprehensive survey of human structure of the trunk, upper and lower extremities, and their relationship to injuries; implications for rehabilitation and post-surgical therapeutic exercise programs.

HPSS 5470. SPORTS NUTRITION (3) Application of nutritional principles, physiology and biochemistry of nutrients and nutrient homeostasis in humans at the cellular, tissue, organ and system level as related to exercise and human performance.

HPSS 5500. PROBLEMS IN SPORT MANAGEMENT (3) Examination of problems confronting administrators; theoretical models of moral and ethical development will be examined; codes of ethics and case studies will be analyzed to develop a framework for problem solving. An examination of leadership styles, philosophies, and practices in contemporary settings and the evolution of leadership will also be examined.

HPSS 5510. FINANCIAL ADMINISTRATION OF SPORT (3) A study of the basic principles of financial management, budgeting, accounting, debt and cash management, and other functions. Methods of evaluating the financial condition of sport organizations will be presented.

HPSS 5600. SPORT FACILITIES DESIGN & MANAGEMENT (3) Principles of planning facilities for sport, physical education, and recreation; relationship of facilities to programs; budgeting, financing, and construction oversight.

HPSS 5620. SPORT MARKETING & PUBLIC RELATIONS (3) Practical application of the principles of marketing, publicity, and public relations for use in sport and recreation. Class project may entail working with local agency for a sport marketing campaign.

HPSS 5650. SPORT POLICIES AND PROCEDURES (3) Analysis of sport governing organizations such as IOC, NCAA, NFHS, TSSAA, and others; requirements for membership, compliance, and examination of the rules and penalties assessed.

HPSS 5700. SPECIAL TOPICS (3) Covers a diverse selection of topics, issues, and complex problems that confront practitioners. Efforts will be made to explore new paradigms, encourage independence of thought, seek pro-active problem resolution, and develop critical thinking abilities.

HPSS 5710. CURRICULUM, INSTRUCTION & SUPERVISION (3) Practical methods and materials employed in the testing of play activities, fundamental skills, and athletic games are emphasized. Program evaluation and improvement, facilities and equipment, as well as criteria for determining their adequacy, are stressed. An examination of the design, construction, improvement, and evaluation of curriculum in physical education will be incorporated.

HPSS 5800. STRATEGIC MANAGEMENT (3) Examines the processes for planning, growth, development, expansion and management in sport through technical and professional applications of strategic management principles. By permission of instructor.

HPSS 5910. INDEPENDENT STUDY (3) Designed to provide opportunities to make an intensive in-depth study of an area of interest selected by the student in health, physical education, or recreation. Organized as an independent study experience, the selected project should be centered around some problem or area of interest related to the student's administrative, teaching, or leadership responsibilities.

HPSS 5920. ADMINISTRATIVE PRACTICUM (3-6) Supervised administrative practicum in selected health, physical education, or recreation responsibilities as evidenced in gainful employment in these areas; designed to provide practical administrative experiences in an area of professional interest to the student. Variable credit hours will allow students to receive credit for flexible time commitment for the course—each credit hour of enrollment will require 50 clock hours spent in practicum. Directed and evaluated by faculty advisor.

HPSS 5930. INTERNSHIP (3-6) A planned and supervised professional internship allowing students to apply theoretical concepts in practical applications. Variable credit hours will allow students to receive credit for flexible time commitment for the course—each credit hour of enrollment will require 50 clock hours spent as interns. Directed and evaluated by faculty advisor.

HPSS 6020. PROJECT (3) A terminal course centered around action research or applied research in the area of the candidate's professional responsibilities. The course requires an oral examination at conclusion of the written project.

GRADUATE FACULTY

Hezekiah Foreman, Professor

B.A., 1959, M.A., 1969, Tennessee State University; Ph.D., 1980, Southern Illinois University at Carbondale

Essamedin R. Hamido, Assistant Professor

B.S., 1988, Ain Shamps University; M.A.Ed., 1996, Ed.D. 1999, Tennessee State University

Jesse James, Associate Professor

B.S., 1973, M.A., 1975, Ed.D., 2000, Tennessee State University

Timothy Jones, Assistant Professor

B.S., 1993, Ohio University; M.S., 1995, Frostburg State University; Ed.D., Tennessee State University

Terry Silver, Assistant Professor

B.S., 1984, Appalachian State University; M.A.Ed., 2001, Ed.D., 2004, Tennessee State University

Catana R. Starks, Professor and Acting Department Head

B.S., 1971, M.A.Ed., 1973, Tennessee State University; Ed.D., 1989, Tennessee State University

DEPARTMENT OF PSYCHOLOGY

Dr. Linda Guthrie, Head
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(615) 963-5160

The graduate program in psychology offers curricula leading to the Doctor of Philosophy degree in Psychology in two concentrations: Counseling Psychology and School Psychology; the Master of Science in Psychology degree with two concentrations: Counseling Psychology and School Psychology; and a Master of Science in Pre K 12 School Counseling. There is also an Ed.S. degree in School Psychology. The course offerings consist of a core of basic psychology courses common to preparation of the student for work and certification or licensure (if required) in the area of specialization.

Note: Graduate degrees in Psychology are not an assurance of certification and/or licensure in the fields of psychology, counseling, and/or school counseling. Degrees are meant to be preparation only. Suggested additional course work and experience will be addressed in annually updated student handbooks and additional material. As informed consumers of education, students should always check the license and certification requirements in the state(s) or countries in which they plan to work.

MAJOR: PSYCHOLOGY
DEGREE: DOCTOR OF PHILOSOPHY
(Ph.D.)
CONCENTRATIONS:
Counseling Psychology
School Psychology

The doctoral program offered by the Department of Psychology includes two concentrations: Counseling Psychology and School Psychology. Both concentrations seek to prepare graduates for licensure as Counseling Psychologists and School Psychologists as established by the State Board of Examiners in Psychology—Division of Health Related Boards and the Tennessee Board of Education, respectively. Prior graduate course work and the student's goals and objectives are considered in determining annual admissions and the individual student's program of study.

Admissions Requirements

A master's degree in psychology, counseling, school psychology, or a related area is required. There is a ceiling on the number of students admitted to the program in a given year. All applicants must submit the following materials to the Graduate School Office by December 1st for admission in the Fall:

1. An application for admission to the Graduate School.
2. Transcripts of all undergraduate and graduate course work. A minimum grade point average of 3.25 at the Master's level is required.
3. Quantitative and Verbal Scores on the Graduate Record Examination (GRE) or Millers Analogy Test (MAT) are required. While both the GRE and MAT are acceptable, the GRE is strongly preferred. The minimal acceptable standards for admission are 3.25 Master's GPA and a 900 on

the GRE (Verbal + Quantitative) or 402 on the MAT. Exceptions may be considered for applicants with extraordinary qualities who have demonstrated excellence in the field of work or research, and who add diversity to the program. However, a student whose combined GRE is less than 1000 or whose MAT is less than 425 is not normally considered for admission. Conditional admission is not offered at the Doctoral level.

4. A work history, that is, a resume that includes work experience and research experience.
5. Three letters of recommendation submitted on the doctoral recommendations forms distributed by the Graduate School.
6. A supplemental application to the Counseling Psychology (Ph.D.) program.

Selection of students for the Doctoral Program in Psychology is highly competitive. Applicants whose materials are received by the December 1st deadline will be evaluated by the respective program committees that will select the applicants to be interviewed on the campus in early February. An interview is required for admission. In keeping with the Uniform Notification Date established by the American Psychological Association, if selected for admission, the applicant will be notified and must respond not later than April 15th to the offer. Admissions are based upon the following criteria:

1. Past academic performance as indicated by undergraduate and graduate grade point average, test scores, and course work at the undergraduate and graduate levels in Psychology.
2. Research and scholarly pursuits as demonstrated by research involvement, presentations, publications, and writing sample.
3. Counseling and interpersonal skills as demonstrated by work experiences including practicum and internships as well as work in the fields of counseling, school psychology, other professional activities, and supervised experiences.
4. Goodness of fit between the goals of the applicant and the goals of the program.
5. Commitment to the field as evidenced by licensure or certification in Psychology or Education as well as involvement in professional associations.
6. Experience with diverse populations.

General Departmental Requirements

In order to obtain the Doctorate of Philosophy in Psychology in Counseling or School Psychology a student must successfully complete the following:

1. A minimum of sixty six (66) semester hours of approved course work for Counseling Psychology concentration and sixty three (63) semester hours of approved course work for School Psychology concentration beyond the master's degree.
2. A residency consisting of two (2) consecutive semesters of full time enrollment (a minimum of 9 credit hours per semester).
3. A written qualifying examination.
4. A written comprehensive examination and an oral examination.

5. An approved internship (explained below).
6. A dissertation (explained below).

Internship

A 2000 hour (minimum) pre-doctoral internship is required of the Ph. D. in both Counseling and School Psychology concentrations. Placement of our students in acceptable internships has traditionally occurred, however, obtaining an internship is based upon a national selection process and the University does not guarantee the availability of or selection for an internship. APA approved internships are mandatory for students in the Counseling Psychology concentration except in extenuating circumstances (e.g., geographically bound, family circumstances, etc.). Students seeking this exception must make their desire known in writing to the Program Coordinator as soon as they become aware of the need to for such an alternative. In this case, the internship must be listed in the Association of pre and Post-Doctoral Internship Center (APPIC) directory. It is highly likely that in order to fulfill the internship requirement, out of state relocation may be necessary.

Dissertation

A student may not enroll in Dissertation until the semester after s/he has successfully completed the comprehensive examination. Once enrolled, the student must continuously re-enroll each semester until the dissertation is successfully completed and defended. Only research that is of an original nature will be accepted. It is required that the dissertation proposal be approved prior to application for internship.

COUNSELING PSYCHOLOGY CONCENTRATION

The doctoral concentration in Counseling Psychology is accredited by the American Psychological Association. It is also a designated Doctoral Program in Psychology of the American Association of State Psychology Boards (AASPB) and is listed in the Council for the National Register of Health Service Providers in Psychology. The Counseling Psychology concentration is designed for students seeking training as Scientist-Professionals. The Concentration requires a minimum of sixty six (66) semester hours. These hours included core courses in education, psychology, specialty electives, practicum and dissertation.

Typically students complete the following prerequisite course work in their master's program prior to entry into the doctoral program: statistics, theories of counseling, counseling techniques, social psychology, career counseling, physiological psychology, intelligence testing, theories of learning, history and systems of psychology and two substantive areas such as psychometrics, developmental psychology, or theories of personality. It is the doctoral student's responsibility during the first semester of enrollment to meet with the assigned faculty advisor to review the student's prior work to insure that such graduate work has been completed and to recommend needed courses.

A student enrolled in the Counseling Psychology concentration may take the Qualifying Examination for the doctoral degree only after completing all prerequisite master's level courses, and Statistics and Computer Applications for Research (PSYC 7136).

PROGRAM OF STUDY

EDCI 6300	Multi-cultural Education or	3
PSYC 7270	Multicultural Counseling	3
PSYC 7136	Statistics & Computer Applications	3
PSYC 7137	Advanced Statistics & Research Methods	3
PSYC 7730	Qualitative Research or PSYC 7536	3
PSYC 7150	Change Processes—Theory, Research & Efficacy	3
PSYC 7160	Pre-Practicum	1
PSYC 7255	Psychopathology	3
PSYC 7256	Assessment of Psychopathology	3
PSYC 7260	Practicum	1
PSYC 7530	Consultation	3
PSYC 7050	Ethics & Professional Issues in Counseling Psychology	3
PSYC 7365	Doctoral Practicum in Counseling Psychology	2
PSYC 7366	Doctoral Practicum in Counseling Psychology	2
PSYC 7367	Doctoral Practicum in Counseling Psychology	3
PSYC 7368	Doctoral Practicum in Counseling Psychology	3
PSYC 7555	Individuals: Assessment, Theory & Intervention	3
PSYC 7556	Couples, Families & Systems: Assessment, Theory & Intervention	3
PSYC 7557	Supervision: Assessment, Theory & Intervention	3
PSYC 7750	Career Development: Theories, Methods & Contemporary Issues	3

Electives 9

Dissertation 6-15

PSYC 8110 Dissertation Research.

Prior to enrolling in PSYC 8110, students must have successfully completed comprehensive examinations. Once students begin the dissertation, they must register for PSYC 8110 every semester until the dissertation is complete and defended. After the fifth registration for dissertation, students register in "Dissertation Continuation" at a reduced fee.

Doctoral Internship 0-0-0

PSYC 8095, 8096, 8097 Internship (Counseling Psychology)

The successful completion of one year, full-time internship or a two year half-time internship in Psychology at a site approve by the Program Coordinator of Counseling Psychology is required for the awarding of the degree. Students must enroll in PSYC 8095, 8096, 8097 during the internship year.

SCHOOL PSYCHOLOGY CONCENTRATION

The doctoral concentration in School Psychology is a designated Doctoral program in Psychology of the American Association of State Psychology Boards (AASPB) and the Council for the National Register of Health Service Providers in psychology. The school psychology doctoral program provides advanced training to work as a professional psychologist in schools and other settings. The program utilizes an ecological-contextual orientation in working with children, schools and families.

The doctoral concentration in School psychology requires a minimum of sixty-six (63) semester hours. These hours include core courses in education, psychology, guided specialty electives, practicum and dissertation.

Students admitted to the Ph.D. degree program in School Psychology who have been awarded the Ed.S. degree in school psychology from accredited institutions may be granted full credit for a maximum of thirty hours if the hours are acceptable to the students program.

A student enrolled in the School Psychology concentration may take the qualifying examination for the doctoral degree only after graduate courses in the following areas have been completed: statistics, psychometrics, theories of counseling, individual intelligence testing and learning theory. Typically students complete the above graduate work in their master's program prior to entry into the doctoral program. It is the doctoral student's responsibility during the first semester of enrollment to meet with the assigned faculty advisor to review the student's work to insure that such graduate work has been completed and to recommend needed courses.

PROGRAM OF STUDY

EDCI 6300	Multi-cultural Education	3
PSYC 6430	History & Systems of Psychology	3
PSYC 6900	Role and Function of the School Psychologist	3
PSYC 7136	Statistics & Computer Applications	3
PSYC 7137	Advanced Statistics & Research Methods	3
PSYC 7150	Change Processes—Theory, Research & Efficacy	3
PSYC 7160	Pre-Practicum	1
PSYC 7170	Social Psychology: Research in Gender Roles	3
PSYC 7255	Psychopathology	3
PSYC 7256	Assessment of Psychopathology	3
PSYC 7260	Practicum	1
PSYC 7465	Doctoral Practicum in School Psychology	2
PSYC 7466	Doctoral Practicum in School Psychology	2
PSYC 7555	Individuals: Assessment, Theory & Intervention	3
PSYC 7556	Couples, Families & Systems: Assessment, Theory & Intervention	3
PSYC 7557	Supervision: Assessment, Theory & Intervention	3
PSYC 7530	Consultation and Program Evaluation OR	3
PSYC 7730	Qualitative Research	3
PSYC 7710	Psycho educational Assessment	3

Specialty Guided Electives (As Approved by Advisor) 6

Dissertation 6-15

PSYC 8110 Dissertation Research

Prior to enrolling in PSYC 8110, students must have successfully completed comprehensive examinations. Once students begin the dissertation, they must register for PSYC 8110 every semester until the dissertation is complete. After the fifth registration for dissertation, students register in "Dissertation Continuation" at a reduced fee.

Doctoral Internship

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PSYC 8105, 8106, 8107 Internship (School Psychology)

The successful completion of one year, full-time internship or a two year half-time internship (minimum 2000 hours) in Psychology at a site approved by the Program Coordinator of School Psychology is required for the awarding of the degree. Students must enroll in PSYC 8105, 8106, 8107 during the internship year.

MAJOR: SCHOOL PSYCHOLOGY
DEGREE: EDUCATIONAL SPECIALIST (Ed.S.)

The school psychology Ed.S. program prepares students to work effectively with school personnel, parents and children to resolve learning and behavioral problems. Requirements for licensure reflect those of national organizations and the Tennessee Board of Education.

Admission Requirements

Admission requires a graduate degree in school psychology or the equivalent course work. Equivalent course work is defined as a master's degree in a closely related field. A minimum MAT score of 393 or GRE (Verbal and Quantitative) score of 800 is required.

Degree Requirements

A minimum of 33 course hours are required for the specialist degree. If there are course deficiencies in the master's program, they will be included in the Ed.S. program of study. These deficient courses must be completed in order to be eligible for licensure or certification as a School Psychologist. Students must also complete a nine-month internship (minimum 1200 hours) under the supervision of the faculty and a qualified school psychologist in public schools. Course requirements need to be successfully completed prior to the internship. The culminating experience will be submission of a professional portfolio and completion of the PRAXIS II (Nationally Certified School Psychologist (NCSP) Examination) during their internship year.

PROGRAM OF STUDY

Required Courses—33 Hours

EDAD 5020	Philosophy & Introduction to Schools	
OR		
EDAD 5640	Social and Political Issues in School Communities	3
EDRD 5640	Diagnosis & Treatment of Reading Disabilities	
OR		
EDRD 6050	Strategies of Developing Reading & Study Skills	3
PSYC 6470	Individual Testing & Report Writing	3
PSYC 6725	Practicum in School Psychology	3
PSYC 6726	Practicum in School Psychology	3
PSYC 6915	Internship in School Psychology (Specialist)	3
PSYC 6916	Internship in School Psychology (Specialist)	3
PSYC 6920	Psychological Disorders of Children	3
PSYC 6930	Alternatives to Standardized Assessment	3
PSYC 6940	Consultation in the Schools	3
PSYC xxxx	Guided Elective	3

MAJOR: PSYCHOLOGY
DEGREE: MASTER OF SCIENCE (M.S.)
CONCENTRATIONS:
Counseling Psychology
School Psychology

COUNSELING PSYCHOLOGY CONCENTRATION

The curriculum is designed for students seeking preparation for a career in various types of mental health settings and related organizations, or for students planning to pursue a Ph.D. The primary goal is to provide a solid psychological core with a focus on emotional, social, vocational, health, and educational issues across the life span. Recognizing the value of both practice and research, the Counseling concentration offers two options: thesis or non-thesis.

Admission Requirements

Admission requires an undergraduate major in psychology or related field. Undergraduate study should include at least one course in general psychology, elementary statistics, research methods, testing, abnormal psychology, physiological psychology, social psychology, history and systems and developmental psychology. The minimum acceptable admission requirements of the Graduate School are a 2.5 or higher GPA, a composite GRE (Verbal + Quantitative + Subject) of 870 or higher, or a MAT of 370 for unconditional admission. Conditional admission is offered for 2.25-2.49 GPA with a composite GRE (Verbal + Quantitative + Subject) of 935 or higher or a MAT of 383, or a 2.0-2.24 GPA with a composite GRE (Verbal + Quantitative + Subject) of 1000 or higher or MAT of 394 or higher. GRE scores are preferable to MAT scores. Students admitted conditionally must earn a "B" or better in the first twelve hours of graduate work to gain the unconditional status.

In addition the student should submit in duplicate ALL of the following information in a single envelope directly to the Graduate School:

1. Three (3) letters of recommendation—one of which should be from an academic advisor or his or her designee.
2. A letter of aspiration (personal statement) indicating why the applicant has chosen to pursue a degree in this area along with his or her academic and career goals.
3. Once the above criteria have been met, the Coordinator of the program will contact the applicant and arrange an interview with the members of the Graduate Admissions Committee prior to final recommendation for admission to the program.

All application materials including the letters of recommendation and aspiration must be received by the Graduate School by March 15 for admission for fall semester.

Degree Requirements

A minimum of four semesters and a summer term of residential study are required to complete the program within a two year period. The thesis option requires fifty-three (53) semester hours of approved course work. The non-thesis option requires fifty-eight (58) semester hours of approved course work.

Thesis Option

This option is appropriate for students planning to pursue a Ph.D. The candidate must submit a thesis on a topic approved by the thesis advisor. A minimum of fifty-three (53) semester hours of approved course work is required.

Non-Thesis Option

The non-thesis option is for students who choose to focus on training in the practice aspects of psychology. Students who select the non-thesis option will be required to take a minimum of 58 hours of course work (including 6 hours of electives above the core requirements) and a Comprehensive Examination. The Comprehensive Examination is a written examination which must be completed during the semester of graduation.

PROGRAM OF STUDY

Required Core Courses—52 Hours (Thesis and Non-thesis)

PSYC 5030	Biological Bases of Behavior	3
PSYC 5040	Statistics & Methodology	3
PSYC 5060	Cognitive/Affective Bases of Behavior	3
PSYC 5070	Professional Issues and Ethics in Counseling Psychology	3
PSYC 5100	Counseling and Interviewing Skills	2
PSYC 5135	Abnormal Psychology	3
PSYC 5136	Theories of Personality	3
PSYC 5140	Statistics & Computer Applications	3
PSYC 5170	Counseling Theory	3
PSYC 5200	Advanced Counseling and Interviewing Skills	2
PSYC 5270	Vocational Theory & Testing	3
PSYC 5530	Psychometrics	3
PSYC 5630	Child and Adolescent Development	3
PSYC 6130	Social Bases of Behavior	3
PSYC 6170	Individual Tests of Intelligence	3
PSYC 6430	History & Systems of Psychology	3
PSYC 6505	Masters Counseling Psychology Practicum	3
PSYC 6506	Masters Counseling Psychology Practicum	3

Thesis Option Requirement

PSYC 6540	Thesis	1
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Non-Thesis Option Requirements

Electives—6 hours (Any 2 of the following courses)		
PSYC 5190	Group Counseling & Guidance	3
PSYC 5230	Learning Theories	3
PSYC 5570	Individuals, Couples & Family Systems Assessment: Theory & Intervention	3
PSYC 6370	Interest, Aptitude & Achievement Testing	3
PSYC 6550	Health Psychology	3

SCHOOL PSYCHOLOGY CONCENTRATION

Applicants with bachelor's degrees will be admitted initially into the M.S. program. Upon successful completion of the M.S., students may apply for admission to the Ed.S. or Ph.D. program. Students typically are not eligible for licensure as a school psychologist with only a master's degree.

Admission Requirements

Admissions requires an undergraduate major in psychology or related field. Undergraduate study should include at least one course in statistics, testing, abnormal, physiological, social, and developmental. The minimum acceptable admission requirements of the Graduate School are a 2.5 or higher GPA, a composite GRE (Verbal + Quantitative + Subject) of 870 or higher, or a MAT of 370 or higher for unconditional admissions. Conditional admission may be offered for 2.25-2.49 GPA with a composite GRE (Verbal + Quantitative + Subject) of 870 or higher or a MAT of 381, or a 2.0-2.24 GPA with a composite GRE (Verbal + Quantitative + Subject) of 1000 or higher or a MAT of 394 or higher. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. Students admitted conditionally must earn a "B" or better in the first twelve hours of graduate work to gain the unconditional status.

Degree Requirements

A minimum of four semesters and a summer term of residential study and forty (42) semester hours of approved course work are required. These courses are prerequisites for both the Ed.S. and Ph.D. degrees in School Psychology.

PROGRAM OF STUDY

Required Courses—42 Hours

EDCI 5300	Multicultural Education	3
EDSE 5530	Education & Psychology of Exceptional Children	3
PSYC 5030	Biological Bases of Behavior	3
PSYC 5040	Statistics & Methodology	3
PSYC 5100	Counseling and Interviewing Skills	2
PSYC 5140	Statistics & Computer Applications	3
PSYC 5170	Counseling Theory	3
PSYC 5200	Advanced Counseling and Interviewing Skills	2
PSYC 5230	Theories of Learning	3
PSYC 5530	Psychometrics	3
PSYC 5630	Child and Adolescent Development	3
PSYC 6130	Social Bases of Behavior	3
PSYC 6170	Individual Tests of Intelligence	3
PSYC 6540	Thesis	1
PSYC 6900	Role and function of the School Psychologist	3

MAJOR: GUIDANCE AND COUNSELING
DEGREE: MASTER OF SCIENCE (M.S.)
CONCENTRATION:
Pre-K-12 School Counseling

PRE-K-12 SCHOOL COUNSELING CONCENTRATION

The primary goal of the Guidance and Counseling Psychology Program is to train competent and culturally aware counselors to support teachers, other professional personnel and parents in addressing the needs of students from diverse backgrounds related to academic and career preparation as

well as personal growth and development. Special emphasis is placed on prevention and recognition of values and strengths. Pre K 12 School Counseling curriculum is designed to meet the requirements for certification as set forth by the Tennessee State Board of Education.

Admission Requirements

The curriculum requires the bachelor's degree (any major) including twelve (12) semester hours in psychology with at least one course in each of the following areas: general psychology, elementary statistics, human development, and abnormal psychology or adjustment. Both introduction to psychological tests and measurement and foundations of psychological investigation are strongly recommended as prerequisites, as well. Admission to the program does not require the applicant to have a teacher's certificate. The minimum acceptable admissions requirements in accordance with the Graduate School are a 2.5 or higher GPA with a composite GRE (Verbal + Quantitative + Subject) of 870 or higher or a MAT of 370 or higher. Additional program admission requirements are as follows:

1. Three letters of recommendation to be submitted directly to the Program Coordinator.
2. A letter stating applicant's purpose for aspiring to become a school counselor. The letter is to be submitted directly to the Program Coordinator.
3. A review of applicant's files by the Program Coordinator and a personal interview with the Pre-K-12 School Counseling Committee.

NOTE: Applicants should check with the program coordinator for any possible changes in admissions or degree requirements upon application to the program.

Degree Requirements

A minimum of four semesters and a summer term of residential study and forty eight (48) semester credits of approved course work. All candidates must successfully complete a final written comprehensive examination.

Note: Licensure as a Professional School Counselor in the state of Tennessee requires a minimum score of 580 on the Praxis II School Counselor (K-12) Specialty Area Test. The test application is available in the Office of Teacher Education, Clay Education Building, room 112.

PROGRAM OF STUDY

Required Courses 48 credits*

* Fifty-one credits are required of all students who do not hold a valid teacher's certificate/license.

AREA I	Human Growth and Development (6 Hours)	
PSYC 5630	Child and Adolescent Development	3
EDSE 5530	Education and Psychology of Exceptional Children	3
AREA II	Social and Cultural Foundations (9 Hours)	
PSYC 5130	Abnormal Psychology and Theories of Personality	3
PSYC 5570	Individual, Couples, and Family Systems	3
PSYC 6130	Social Bases of Behavior	3
AREA III	The Helping Relationship (*12 or 15 Hours)	
PSYC 5170	Counseling Theories	3

*PSYC 6360	Pre- Practicum Field Experience	3
PSYC 6460 (6320)	Practicum in School Counseling- Middle	3
PSYC 6405	Counseling Internship—Elementary Level	3
PSYC 6406	Counseling Internship—Secondary Level	3
AREA IV	Group Work (3 Hours)	
PSYC 5190	Group Counseling and Guidance	3
AREA V	Career and Lifestyle Development (3 Hours)	
PSYC 5270	Vocational Choice Theory and Testing	3
AREA VI	Appraisal (6 Hours)	
PSYC 5530	Psychometrics	3
PSYC 6370	Interests, Aptitude and Achievement Testing	3
AREA VII	Research and Program Evaluation (3 Hours)	
PSYC 5040	Statistics and Methodology	3
AREA VIII	Professional Orientation (6 Hours)	
PSYC 5080	Professional Issues and Ethics for Counselors	3
PSYC 5090	Guidance and Counseling in the Schools	3

Required Field Experience

Practicum: Students are required to complete 100 clock hours of observation and participation in a school counseling setting.

Internships: Students are required to complete 300 clock hours (approximately 20-25 hours per week) of on-site field experience and practice during each of two semesters of internship experience: Elementary School Counseling (6405) and Secondary School Counseling (6406).

ENDORSEMENT ONLY STUDENTS

Individuals who seek the State Department of Education endorsement through the Pre-K-12 School Counseling concentration, but do not intend to pursue a degree through TSU, must:

1. Have earned a Master's Degree in School Counseling or a related area.
2. Apply for non degree admission to the Graduate School.
3. Contact the Program Coordinator to arrange an interview with the Pre-K-12 School Counseling Committee.

COURSE DESCRIPTIONS

PSYC 5030. BIOLOGICAL BASES OF BEHAVIOR. (3) An examination of the theory and research related to variations of environmental energy to the physiological correlates of human behavioral processes specifically psychological reactions of sensing and perception are covered. Prerequisites: Admission to the Graduate School and PSYC 3300 (undergraduate physiological psychology).

PSYC 5040. STATISTICS AND METHODOLOGY. (3) Conceptual treatment of quantitative statistical tools and research methodology for use in research, testing and understanding scientific literature. The student is introduced to different methods of planning and conducting research. Emphasizes the logic underlying research investigation, methodology, analysis, and interpretation of data. Prerequisite: PSYC 2180 (Undergraduate Elementary Statistics).

PSYC 5070. PROFESSIONAL ISSUES AND ETHICS IN COUNSELING PSYCHOLOGY. (3) Seminar in Professional ethical and legal issues in the field. Ethical guidelines for research, teaching, human services, and public policy will be covered. Prerequisite: Admission to the Graduate School.

PSYC 5080. PROFESSIONAL ISSUES & ETHICS FOR PRE-K-12 SCHOOL COUNSELORS. (3) This seminar course is designed to introduce students to ethical codes, legal guidelines and professional issues relevant to the field of school counseling. Students will be exposed to a wide range of topics and readings, and be expected to write an original re-

search paper on a salient topic of their choosing. Prerequisites: Admission to the Graduate School.

PSYC 5090. GUIDANCE AND COUNSELING SERVICES IN THE SCHOOLS. (3) Master's Specialty Core course for Pre K 12 concentration. History, principles, and philosophy of School Guidance and Counseling Services. This course examines the management of Guidance and Counseling Services which includes definition of roles, functions, the use of resources, referrals, consultation, use of time, facilities, budget and the use of research and evaluation to improve programs. Students holding a master's degree and seeking certification must take this course. Prerequisite: Admission to the Graduate School.

PSYC 5100. COUNSELING AND INTERVIEWING SKILLS (2) Supervised laboratory experience in developing essential interpersonal skills for counseling effectiveness, self-exploration and videotape analysis; introduction to client intake and initial diagnostic procedures; introduction to ethical considerations; the influence of gender, racial-ethnic, and other factors related to diverse populations applications to counseling. Prerequisites: Admission to the Graduate School.

PSYC 5135. THEORIES OF PERSONALITY (3). Theoretical, contemporary and empirical comparisons of personality development systems to account for both normal and deviant behavior. Prerequisites: Admission to the Graduate School.

PSYC 5136. ABNORMAL PSYCHOLOGY (3). Theories of abnormal personality and their expansion into applied techniques in advanced psychopathology and diagnosis. Introduction to the theoretical, contemporary and empirical comparisons of personality development systems to account for both normal and deviant behavior. Prerequisites: PSYC 5135. No prerequisite for Pre-K-12 School Counseling Majors.

PSYC 5140. STATISTICS AND COMPUTER APPLICATIONS. (3). Complex data analysis and interpretation of additional multivariate topics not covered in PSYC 5040 with the use of statistical analysis packages (e.g., SPSS/Windows) and computer application to research and educational problems in order to facilitate better research consumerism by practicing professionals. Prerequisite: PSYC 5040.

PSYC 5170. COUNSELING THEORY. (3) Integration of personality theory into counseling theories. Exploration of major trends in psychotherapeutic theory, techniques and current research. Philosophical bases of helping relationships; development of counselor and client self-awareness. Theory and research on issues and problems in counseling clients from different cultural backgrounds will be emphasized. Introduction to the most current Diagnostic Statistical Manual (DSM) will be included. Prerequisites: PSYC 5135 and PSYC 5136.

PSYC 5190. GROUP COUNSELING AND GUIDANCE. (3) Specialty Core Course for Pre-K-12. Designed to prepare the student for practicum and internships in Pre-K-12 counseling as it relates to group process, dynamics, techniques including establishing goals, group selection, time management, presentation and facilitation. Prerequisite: PSYC 5170.

PSYC 5200. ADVANCED COUNSELING AND INTERVIEWING SKILLS. (2) This course is designed to facilitate progressively greater degrees of skill development in counseling. This practicum provides the opportunity for the student to engage in performing the roles of counselor under supervision. Includes a weekly seminar-type class for consideration of ethical issues, problems encountered in practicum and for relating theory to practice and specific training in interviewing, assessment, treatment planning and termination issues in counseling, clinical or school settings. Involves supervised laboratory exposure to clients with developmental issues and skills assessment. If satisfactory level of competence is not obtained by established time frame, the student will repeat course prior to progressing to PSYC 6505, 6720, or 6910. Students must demonstrate proof of current professional liability insurance. Prerequisites: PSYC 5100; admission to the graduate program in psychology.

PSYC 5230. LEARNING THEORIES. (3) This course emphasizes the major problem areas, methodology, theories and research in complex behaviors. Prerequisite: Admission to the Graduate School.

PSYC 5270. VOCATIONAL THEORY AND TESTING. (3) Theories and empirical research related to vocational choice, decision-making, and assessment including interest, aptitude, and ethics as it relates to the world of work over the lifespan. The student will be able to demonstrate the application of this knowledge in career exploration through formal assessment including technological approaches to career planning. Prerequisites: Admission to a graduate program in Psychology.

PSYC 5430. ADVANCED EDUCATIONAL PSYCHOLOGY. (3) A consideration of the principles, as applied to education. Issues relevant to intellectual development, socialization, and educational evaluation are examined. Additionally, teacher variables and student variables in the instructional process are explored.

PSYC 5530. PSYCHOMETRICS. (3) Basic psychometric concepts to prepare the student for subsequent evaluation instruments. Origin and logic of testing, criteria for judging tests, standardization, reliability, and validity and principles of test development and construction. Examination of principles, strategies, and methodologies of interviewing and report writing of measurement of individual and group differences. Special emphasis is placed upon interpreting these concepts in light of diversity issues. Prerequisite: PSYC 5040; Admission to graduate program in Psychology or Pre-K-12 School Counseling.

PSYC 5570. INDIVIDUALS, COUPLES, & FAMILY SYSTEMS ASSESSMENT: THEORY & INTERVENTION. (3) Theory, research and assessment techniques related to treatment of individuals, couples, & traditional families and non traditional family systems including impact of personal and vocational concerns on the system. Prerequisites: PSYC 5170.

PSYC 5630. CHILD & ADOLESCENT DEVELOPMENT. (3) Theories and research of child and adolescent development in the normal individual. Emphasis on human socialization, physical, cognitive and emotional development from conception through adolescence. Prerequisites: Admission to the Graduate School; PSYC 5040.

PSYC 6130. SOCIAL BASES OF BEHAVIOR. (3) Theoretical explanations and empirical research related to of human behavior in diverse social groupings. Emphasis on dynamics of group processes, the psychological basis of group behavior, conflict resolution and evaluation of social programs. Prerequisites: PSYC 5030, PSYC 5230, PSYC 5530 or permission of instructor.

PSYC 6170. INTELLECTUAL ASSESSMENT. (3) Offers training and practice in administering, scoring, analysis and transmission of test data to both clients and other professionals. Emphasis on the use of standardized individual tests of intelligence. Ethics and multi-cultural concerns related to assessment are covered. The student is required to acquire proficiency in the use of the Weschler and the Stanford-Binet. Scales. Prerequisite: PSYC 5530; written permission of the instructor is required prior to enrolling.

PSYC 6320. PRACTICUM IN PRE-K-12 SCHOOL COUNSELING. (3) This practicum provides an opportunity for the student to engage in working with clients under supervision in the school setting. It provides for the development of individual and group counseling skills. Students must commit to completing 100 hours within the semester during middle school hours of operation. Prerequisite: PSYC 5170, 5190, and 6360; Permission to enroll requires approval of Coordinator of Pre-K-12 School Counseling Program one semester prior to enrollment.

PSYC 6360. PRE-PRACTICUM FIELD EXPERIENCE FOR PRE-K-12. (3) This course is designed for students with no prior teaching experience. Students enrolled in this class will gain exposure to the whole teaching and counseling milieu through observation in the classroom, assisting with specific classroom activities and participating in case conferences with school personnel which would include the counselor and other members of the student services team. Prerequisites: Admission to the graduate program in Pre-K-12 School Counseling.

PSYC 6370. INTEREST, APTITUDE & ACHIEVEMENT TESTING. (3) Application of principles, strategies, and methodologies of interviewing and report writing in the areas of interests, aptitude, and achievement testing with diverse populations. Prerequisite: PSYC 5530 or equivalent with approval of instructor; Admission to graduate program in Psychology or Pre-K-12 School Counseling.

PSYC 6405. INTERNSHIP: ELEMENTARY SCHOOL COUNSELING. (3) Interns experience the wide range of activities expected of an elementary school counselor, including individual and group counseling; group guidance activities; group assessment; consultation with colleagues and parents; and coordination of guidance and counseling activities. Students spend 300 clock hours during the term under the direct supervision of an experienced, licensed school counselor on-site during the school day. Permission of Pre-K-12 Program Coordinator and application required one term prior to enrollment. Prerequisites: PSYC 5080,5090, 5170, 5190, 5270, 6360 and 6320.

PSYC 6406. INTERNSHIP: SECONDARY SCHOOL COUNSELING. (3) Interns experience the wide range of activities expected of a secondary school counselor, including individual and group counseling; group guidance activities; group assessment; consultation with colleagues and parents; and coordination of guidance and counseling activities. Students spend 300 clock hours during the term under the direct supervision of an experienced, licensed school counselor on-site during the school day. Permission of the Pre-K-12 Program Coordinator and application required one term prior to enrollment. Prerequisites: PSYC 5080,5090, 5170, 5190, 5270, 6360 and 6320.

PSYC 6430. HISTORY AND SYSTEMS OF PSYCHOLOGY. (3) A study of the historical development of the field of psychology with particular emphasis on contemporary psychology. Prerequisites: Admission to the Graduate School.

PSYC 6470. INDIVIDUAL TESTING & REPORT WRITING. (3) This course is part of a sequential competency based assessment series in the advanced study of psychoeducational assessment. Included are the study, administration, and interpretive report writing using measures of intelligence, behavior and achievement as well as assessment of emotion. Emphases of the course are psychoeducational diagnoses based on assessment outcomes. Meaningful psychoeducational recommendations, framed in an integrated psychological report are emphasized. Prerequisite: PSYC 5530 & 6170.

PSYC 6505. MASTER'S PRACTICUM IN COUNSELING PSYCHOLOGY. (3) Supervised practice in psychological work with clients within an approved or clinical setting. Supervision is provided by an on site supervisor and a university supervisor. Students must obtain practica placements and have it approved with the appropriate program coordinator the semester before enrolling in this course. Students seeking licensure or certification also should take responsibility to check requirements for direct services and supervision with the appropriate boards. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to graduate program in psychology; approval of the Counseling Psychology Practicum Coordinator one semester prior to enrollment; PSYC 5200.

PSYC 6506. MASTER'S PRACTICUM IN COUNSELING PSYCHOLOGY.(3) Supervised practice in psychological work with clients within an approved counseling or clinical setting. Supervision is provided by an on site supervisor and a university supervisor. Students must obtain practica placements and have them approved with the appropriate program coordinator the semester before enrolling in this course. Students seeking licensure or certification also should take responsibility to check requirements for direct services and supervision with the appropriate boards. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to graduate program in Psychology; approval of the Counseling Psychology Practicum Coordinator one semester prior to enrollment; PSYC 6505.

PSYC 6540. THESIS. (1) A scientific research thesis is executed under the direct supervision of an approved graduate faculty person. A formal proposal meeting must be held prior to data collection. Generally, completion of the thesis takes at least two enrollments. After the initial enrollment, students enroll in the continuation section until the thesis is successfully defended. Upon acceptance of the written report and the passing of the oral examination, a grade will be awarded designating completion of the project. While students do not enroll in this class until the second year of the Master's, it is strongly encouraged that they consider possible research options throughout their training and speak with respective faculty regarding possible mutual research interests. Prerequisite: PSYC 5040 & 5140.

PSYC 6550. HEALTH PSYCHOLOGY (3). This course focuses on the branch of psychology concerning individual behaviors and lifestyles as they affect a person's physical health. Health psychology includes education, research, and counseling /intervention activities that promote health, prevent or treat illness, and identify health risk factors. The interrelationships between and among biological, social, psychological, intellectual, spiritual, emotional, cultural, and environmental factors and their influence on individual behaviors relating to health, illness prevention and coping will be examined. Prerequisite: Admission to the Graduate School and completion of 12 hours of graduate study.

PSYC 6560. VIOLENCE IN INTERPERSONAL RELATIONS. (3). This class will provide students with an overview of the theoretical paradigms examining the definitions, causes, and interventions of domestic violence. Theories of domestic violence will be examined from both the role of the survivor and perpetrator. The course will also explore violence within dat-

ing relationships and elder abuse. Attention will be given to the how culture, race and ethnicity impact domestic violence and how psychological interventions may be modified to meet the needs of various representative groups. Prerequisite: Admission to the Graduate School and completion of 12 hours of graduate study.

PSYC 6570. PROJECTIVE TECHNIQUES. (3) Designed to familiarize the student with the uses and administration of projective techniques. Research findings as to validity and applicability of the projective approach, ethics, and multi cultural issues relevant to assessment are carefully examines. Prerequisite: Master's degree in Psychology or Counseling awarded; admission to the Doctoral or Ed.S. programs in Psychology or written permission of instructor prior to enrollment.

PSYC 6725. PRACTICUM IN SCHOOL PSYCHOLOGY. (3) First of a two semester practica sequence in an approved school setting. Supervised practice of psychological assessment, intervention and remediation strategies in a school setting. Prerequisite: PSYC 510 and admission to the school psychology program.

PSYC 6726. PRACTICUM IN SCHOOL PSYCHOLOGY. (3) Second of a two semester practica sequence in an approved school setting. Supervised practice of psychological assessment, intervention and remediation strategies in a school setting. Prerequisite: PSYC 6725 and admission to the school psychology program.

PSYC 6825, 6826. MASTER'S INTERNSHIP IN SCHOOL PSYCHOLOGY. (2,2) Supervised practice in psychological work with clients within an approved school setting. Supervision is provided by an on site supervisor and a university supervisor. Student must complete 300 hours of experience per semester with not less than 75% in direct clinical services. Students must obtain internship placement and have it approved with the program coordinator the semester before enrolling in this course. Students seeking licensure or certification also should take responsibility to check requirements for direct services and supervision with the appropriate boards. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to master's program in school psychology; approval of the respective Program Coordinator one semester prior to enrollment; PSYC 6825 is pre-requisite for PSYC 6826.

PSYC 6900. ROLE AND FUNCTION OF THE SCHOOL PSYCHOLOGIST. (3) A course designed to acquaint the student with information specific to the professional specialty of School Psychology. Topics covered will include History and Foundations of School Psychology, Alternative Models for the Delivery of School Psychological Services, Emergent Technologies and the Roles and Functions of the School Psychologist. Prerequisite: Admission to the Graduate School.

PSYC 6915, 6916. SCHOOL PSYCHOLOGY INTERNSHIP (SPECIALIST). (3-3). Supervised practice in psychological work within the public school system. Supervision is provided by the school system and the Program Coordinator of the School Psychology Program. Permission to enroll in this experience requires the approval of the Program Coordinator of the School Psychology Program one semester prior to enrollment.

PSYC 6920. PSYCHOLOGICAL DISORDERS OF CHILDREN. (3). Provides overview of diagnosis and treatment of child/adolescent behavior disorders (ADHD, Conduct problems), emotional and social disorders (Depression, Anxiety, Phobias) and developmental and acquired disorders. Prerequisite: Admission to the Graduate School; PSYC 5130 and/or PSYC 5630.

PSYC 6930. ALTERNATIVES TO STANDARDIZED ASSESSMENT. (3). Theory and practice related to the use of non-normative assessment, including but not limited to structured behavioral observation, curriculum based assessment, functional analysis of behavior and student portfolios. Prerequisite: Admission to the Graduate School; PSYC 5530 or equivalent.

PSYC 6940. CONSULTATION IN SCHOOLS (3). Students learn consultation skills and processing utilizing a number of professional models such as Caplan's model, behavioral and problem solving models, crisis consultation and direct/indirect consultation. Prerequisite: Admission to the Graduate School; PSYC 5100.

PSYC 7050. ETHICS & PROFESSIONAL ISSUES IN COUNSELING PSYCHOLOGY. (3) Professional seminar in ethical, legal and professional issues in counseling psychology. Ethical guidelines for research, human services, teaching and public policy issues will be covered. Prerequisites: Admission to the doctoral program in Psychology.

PSYC 7130. ADVANCED INDEPENDENT STUDY. (3) An intense investigation of an area of study of special interest to the student. Prerequisite: Consent of the instructor and approval of the Department Head.

PSYC 7136. STATISTICS & COMPUTER APPLICATIONS TO RESEARCH. (3) Complex data analysis and interpretation of additional multivariate topics with the use of statistical analysis packages (e.g., SPSS/Windows) and computer application to research and educational problems in order to facilitate research development and production in addition to consumerism. Course will include extra class requirements entailing time in the computer lab to complete assignments. Prerequisite: PSYC 5040 and PSYC 5140.

PSYC 7137. ADVANCED STATISTICS & RESEARCH METHODS. (3) Extension of issues introduced in PSYC 7136 and advanced statistical topics more germane to Psychology graduates conducting research in various settings. Prerequisite: PSYC 7136.

PSYC 7900, 7901, 7902, 7903, 7904, 7905, 7906, 7907, 7908. SPECIAL TOPICS. (3) Special topics in psychology are offered on an alternating basis. Prerequisite: PSYC 7136 or permission of instructor.

PSYC 7150. CHANGE PROCESSES: THEORY, RESEARCH & EFFICACY. (3) Theory and research of counseling and psychotherapeutic change, outcome, and empirically validated treatments focusing short-term approaches to counseling. Prerequisite: Admission to the doctoral program in Psychology; PSYC 7050.

PSYC 7160. PRE PRACTICUM. (1) This pre practicum experience is the first in a series of training experiences designed to facilitate progressively greater degrees of skill development in counseling psychology. Ethics of practice and working with diverse populations is stressed. Skills Assessment including areas such as Mental Status Examinations, interviewing, history taking and interpersonal dynamics must be satisfactorily completed prior to enrollment in subsequent Practice Core components. A review by the Counseling Psychology Program committee may result in the course being repeated if necessary. Failure to satisfactorily complete assessment of skills will result in removal from graduate program. Available only to graduate students in counseling psychology. Prerequisite: Admission to the doctoral program in Counseling Psychology.

PSYC 7170. SOCIAL PSYCHOLOGY: RESEARCH IN GENDER ROLES. (3). Sex differences and similarities from biological and psychological viewpoints and their interrelatedness with the educative and therapeutic process, including the topics of cognitive study and the motive to avoid success; impact of socialization agents including family, peer, media and school; sexual discrimination; theories and research on sex-role stereotyping and acquisition across cultures. Emphasis is on the integration of theory and research. Prerequisite: Admission to doctoral program in Psychology.

PSYC 7255. PSYCHOPATHOLOGY. (3) Theory, research and diagnosis of deviant behavior patterns through the lifespan. Emphasis on most current version of the Diagnostic Statistical Manual (DSM). Prerequisite: Admission to the doctoral program in Psychology; PSYC 7050 & 7150.

PSYC 7256. ASSESSMENT OF PSYCHOPATHOLOGY. (3) Theory, research and application of assessment to diagnosis of deviant behavior patterns throughout the lifespan. Emphasis on most current version of the Diagnostic Statistical Manual (DSM) and objective appraisal techniques. Prerequisite: PSYC 7255.

PSYC 7260. PRACTICUM. (1) This course is designed to provide students an opportunity to observe clinical work of advanced students and to provide counseling to clients with normal developmental concerns under faculty and advanced doctoral student supervision. Prerequisites: PSYC 7160.

PSYC7270. MULTICULTURAL COUNSELING: THEORY, RESEARCH, & INTERVENTION (3). An elective in the doctoral program in Counseling Psychology, this course is a key component I the acquisition of counseling skills necessary to develop ethical practitioners and facilitators of learning with a multicultural perspective capable of integrating science and practice in a variety of settings and modalities. This course may serve as a substitute to meet the requirement of EDCI6300 Multi-cultural Education or may be taken strictly as an elective. Prerequisites: PSYC7050 or permission of instructor.

PSYC 7280. TEACHING OF PSYCHOLOGY. (3). This course introduces the student to issues germane to the teaching of psychology. The course will include didactic as well as observational and applied experience with

current theory and practice of teaching. Particular focus of experiential activities will be with undergraduate populations in a just-in-time approach, although graduate level teaching will also be covered in readings and discussion. This course is required of all students wishing to teach in the Department of Psychology. Prerequisite: Admission to the doctoral program in Psychology.

PSYC 7320. LEARNING THEORIES. (3) FOR NON PSYCHOLOGY MAJORS ONLY. The major problem areas, methodology, theories and research in complex behavior. Prerequisite: Admission to the Graduate School.

PSYC 7365, 7366, 7367, 7368, 7369. DOCTORAL PRACTICUM IN COUNSELING PSYCHOLOGY. (2,2,3,3,1). Five semester sequence of doctoral advanced practice core for Counseling Psychology students. Includes field experience in an approved setting of which 75% should be direct clinical work, weekly supervision seminar with practicum students and university supervisor, and weekly individual supervision with licensed psychologist as site supervisor. During PSYC 7368, students will provide supervision to advanced masters students enrolled in PSYC 6506. Students enrolled in PSYC 7368 must have completed or concurrently be enrolled in PSYC 7557. PSYC 7369 will be offered to students desiring a specialization practicum (e.g., assessment, forensics) on an as-needed basis for summer elective enrollment and may be taken upon completion of PSYC 7365 & 7366. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of Counseling Psychology Practicum Coordinator one semester before beginning course; PSYC 7260.

PSYC 7465. DOCTORAL PRACTICUM IN SCHOOL PSYCHOLOGY. (2) First of two semester sequence of doctoral Advanced Practice Core for School Psychology students. Practical experience in an approved setting. Weekly seminar with practicum students to interact and critique taped client interventions. Weekly individual supervision with university supervisor required. Each semester should entail approximately 300 hours of field experience of which 75% should be direct clinical work. On site supervision by a licensed psychologist is required in addition to faculty supervision. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of program coordinator one semester before beginning course; PSYC 7200.

PSYC 7466. DOCTORAL PRACTICUM IN SCHOOL PSYCHOLOGY. (2) Second of two semester sequence of doctoral Advanced Practice Core for School Psychology students. Practical experience in an approved setting. Weekly seminar with practicum students to interact and critique taped client interventions. Weekly individual supervision with university supervisor required. Each semester should entail approximately 300 hours of field experience of which 75% should be direct clinical work. On site supervision by a licensed psychologist is required in addition to faculty supervision. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of program coordinator one semester before beginning course; PSYC 7465.

PSYC 7530. CONSULTATION AND PROGRAM EVALUATION. (3) This course will focus on the five forms of consultation with special emphasis on methods of program evaluation. It will alternate on an annual basis with Qualitative Research. Prerequisite: PSYC 7137.

PSYC 7555. ASSESSMENT, THEORY & INTERVENTIONS WITH INDIVIDUALS. (3) Theory, research, and assessment techniques related to treatment of individuals including personal and vocational concerns across the lifespan. Prerequisites: PSYC 7050,7150,7255, 7256.

PSYC 7556. ASSESSMENT, THEORY & INTERVENTIONS WITH COUPLES, FAMILIES & SYSTEMS. (3) Theory, research, and assessment techniques related to treatment of couples, families and nontraditional family systems including impact of personal and vocational concerns on the system. Prerequisites: PSYC 7050,7150, & 7255, 7256.

PSYC 7557. ASSESSMENT, THEORY & INTERVENTIONS IN SUPERVISION. (3) Seventh course in the doctoral Advanced Psychological Foundations sequence. Theory, research, and assessment techniques related to providing supervision in treatment settings. Prerequisites: PSYC 7366 or 7466, PSYC 7555, 7556.

PSYC 7558. SUPERVISION PRACTICUM (1). Continuation of PSYC 7557. This course will provide intensive group supervision for the continued development of professional skills in the provision of clinical supervision at the individual level building upon the basic skills and knowledge developed in PSYC 7557. Theory, research, and assessment techniques

related to providing individual-level supervision in treatment settings will be emphasized. Prerequisites: PSYC 7366, PSYC 7555, PSYC 7556, & PSYC 7557.

PSYC 7710. PSYCHOEDUCATIONAL ASSESSMENT. (3) The advanced study of the administration and interpretation of a battery of Psychoeducational assessment procedures with an emphasis on diagnostic testing, academic readiness, academic achievement and intellectual functioning. Emphasis will be based on an integrated view of the individual's Psychoeducational functioning. Prerequisite: PSYC 6170 or written permission of instructor prior to enrollment.

PSYC 7730. QUALITATIVE RESEARCH. (3) This course will focus on advanced qualitative methods and analysis specific to qualitative studies with research with diverse groups. This course will alternate on annual basis with Consultation and Program Evaluation. Prerequisites: PSYC 7137.

PSYC 7750. CAREER DEVELOPMENT: THEORIES, METHODS & CONTEMPORARY ISSUES (3). This course will review the major theories of life long career choice development, and adjustment within the historical context of counseling psychology as well as contemporary issues in the career area. The major career assessment instruments and their applications to career counseling in multi-cultural settings, across the life span will be emphasized.

PSYC 7790. INTERNSHIP PREPARATION SEMINAR. (3) This elective seminar examines issues surrounding the pre-doctoral internship application and selection process. As a seminar, this course will have a "just-in-time" format allowing for discussion of topics relating to securing the capstone experience in an American Psychological Association approved internship and preparing to formally enter a career in professional psychology at the most timely point, the summer immediately prior to application for internship. Prerequisite: third year standing in the doctoral program in Psychology.

PSYC 8095, 8096, 8097. INTERNSHIP (COUNSELING PSYCHOLOGY). (0,0,0). The internship for Counseling Psychology students is a one year, full-time assignment under supervision to an agency approved by the student's program coordinator. It is the student's responsibility to apply for an internship and to enter the national process to obtain such an internship. It is recommended that students consult with their major advisor and program coordinator early on in the doctoral program to gain information regarding the process. The dissertation proposal must be successfully proposed prior to the submission of the first application for internship. Prerequisite: Permission of Counseling Psychology program coordinator one academic year in advance, completion of all coursework and doctoral comprehensive examinations.

PSYC 8105, 8106, 8107. INTERNSHIP. (SCHOOL PSYCHOLOGY). (0,0,0) The internship for School Psychology students is a one year, full time assignment under supervision to an agency approved by the student's program coordinator. It is the student's responsibility to apply for an internship and to enter the national process to obtain such an internship. It is recommended that students consult with their major advisor and program coordinator early on in the doctoral program to gain information regarding the process. Prerequisite: Permission of appropriate program coordinator one academic year in advance, completion of all course work & doctoral comprehensive examinations.

PSYC 8110. DISSERTATION. (3). The design and implementation of an extensive and intensive study of psychological nature requiring the use of quantitative and/or qualitative competencies and skills under the direction of a committee and its chairperson. Students must enroll for a minimum of two semesters. Enrollment may not begin prior to the successful completion of comprehensive examinations and must be maintained each semester until the dissertation has been completed and successfully defended. The dissertation proposal must be successfully proposed prior to the submission of the first application for internship for Counseling Psychology Doctoral students.

GRADUATE FACULTY

Christopher Blazina, Associate Professor
B.S., 1988, Centre College; M.S., 1990, Eastern Kentucky University; Ph.D., 1996, University of North Texas

Misti Counts, Assistant Professor
B.A., 1997, Lipscomb University; M.S., 2000, Middle Tennessee State University; Ph.D., 2003, Tennessee State University

- John Dossett, Assistant Professor
B.S., 1990, M.A., 1995, Ball State University; Ph.D., 2000, University of Tennessee
- Linda Guthrie, Associate Professor and Department Head
B.S., 1965, M.Ed., 1969, Middle Tennessee State University; Ph.D., 2000, Tennessee State University
- Marie S. Hammond, Assistant Professor
B.M.E., 1978, Olivet College; M.A., 1980, Ph.D., 1999, University of Missouri
- Rosemary G. Jeffries, Associate Professor
B.S., 1969, M. S., 1971, Tennessee State University; Ph.D., 1986, George Peabody College of Vanderbilt University
- Wendy Jordanov, Assistant Professor
B.A., 1991, East Tennessee State University; M.S., 1998, University of Tennessee; Ph.D., 2001, University of Memphis
- Kiesha Kelly, Assistant Professor
B.A., 1996, Bowdoin College; M.S., 1999, Rosalind Franklin University of Medicine and Science; Ph.D., 2003, Rosalind Franklin University of Medicine and Science
- Cornell Lane, Associate Professor
B.S., 1962, M.S., 1965, Tennessee State University; Ed.D., 1976, University of Tennessee
- Jeri Lee, Associate Professor
B.A., 1978, East Texas Baptist University; M.S., 1979, Texas Christian University; Ed. D., 1994, Tennessee State University
- Marvin Lee, Assistant Professor
B.A., 1976, University of North Carolina; M.S., 1978, Indiana University; Ph.D. 1987, University of California
- Peter E. Millet, Professor and Dean
B.A., 1985, Oakland University; M.A., 1989, The Ohio State University; Ph.D., 1994, The Ohio State University
- Robin Oatis-Ballew, Assistant Professor
B.A., 1995, Fisk University; M.S., 1998, Howard University; Ph.D., 2001, Howard University.
- Joan Popkin, Assistant Professor
B.S., 1995, university of Tennessee; M.S., 1996, University of Tennessee; Ph.D., 2002, University of Tennessee
- Stacie Putman, Assistant Professor
B.A., 1991, University of Tennessee; M.S., 1997, Ed.D., 2002, University of Memphis
- Stephen Trotter, Professor
B.S., 1972, Stephen F. Austin State University; M.S., 1976, University of Houston; Ph.D., 1981, University of Utah

DEPARTMENT OF TEACHING AND LEARNING

J. Ronald Groseclose, Interim Head
203 Clay (Education) Building
(615) 963-5620

DEGREE: DOCTOR OF EDUCATION (Ed.D.)
MAJOR: CURRICULUM AND INSTRUCTION
CONCENTRATIONS:

Curriculum Planning
Elementary Education
Reading
Secondary Education
Special Education

The doctoral program offered by the Department of Teaching and Learning includes five concentrations: Curriculum Planning, Elementary Education, Reading, Secondary Education, and Special Education. These programs are designed for the in-service educator and the prospective planner and programmer of curriculum. Prior graduate work and the student's interest and career aspirations will be considered in structuring the program of study for each student.

Admission Requirements

1. A minimum Graduate Record Exam (GRE) score of 900 (Verbal & Quantitative), or a minimum Miller Analogies Test (MAT) score of 402, are normally required for admission.
2. A minimum G.P.A. of 3.25 is required on the last graduate degree, either Master's or Education Specialist. No more than thirty (30) semester hours from an Education Specialist degree may be used toward the doctorate. The advisor will recommend the appropriate Education Specialist credits to be transferred.
3. An acceptable work experience record
4. Four (4) letters of recommendation indicating probable success in the program
5. Proof of the ability to write effectively
6. An acceptable interview

The admissions committee will review and weight the entire academic and professional record in making the admissions decision. Equal weight will be given to: (a) previous graduate GPA, (b) GRE or MAT scores, (c) other variables listed above. Applicants whose standardized test scores are below those normally expected for admission will be considered for admission to these programs if: (1) the overall record (based on the above variables) indicates high potential for success in doctoral study, and (2) the applicant's overall potential for success in the program is judged to be comparable to that of the other applicants in the admissions cycle.

General Department Requirements

A minimum of sixty (60) semester hours of approved course work beyond the Master's degree is required: eighteen (18) semester hours of general education core, twenty-four (24) semester hours of departmental core, twelve (12) hours of electives, and six (6) hours credit for the satisfactory

completion of the doctoral dissertation. Also required is the successful completion of a written qualifying examination, a written comprehensive examination, and residency of a minimum of eighteen (18) semester hours over a period of four (4) semesters.

PROGRAM OF STUDY

General Education Core, All Concentrations, 18 hours

EDCI 6300	Multicultural Education	3
EDCI 7000	Foundations of Education	3
EDAD or		
EDCI 7120	Advanced Methods of Research	3
EDAD 7040	Leadership and Interpersonal Relationships	3
EDCI 7450	Learning Theories for Teachers	3
*EDAD 7180	Statistical Analysis in Educational Leadership	3

(*EDAD 6000 is a prerequisite for EDAD 7180.)

CONCENTRATION I: CURRICULUM PLANNING

Specialized Courses—24 hours (other courses with consent of advisor)

EDAD 5030	Instructional Leadership	3
EDAD 6160	The School Principalship	3
EDAD 6200	Organization and Administration Of the Secondary School	3
EDCI 6100	Curriculum Planning and Programming	3
EDCI 6130	Seminar in Curriculum Design	3
EDCI 6150	Seminar in Curriculum Development	3
EDCI 6170	Non-traditional Education Uses of Microcomputers	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 6190	Microcomputers and Educational Services	3
EDCI 6200	Instructional Applications of Word-Processing	3
EDCI 7020	Doctoral Seminar in Curriculum	3
EDCI 7030	Independent Study	3
EDCI 7080	Curriculum Theory	3
EDCI 7110	Seminar in Instruction	3
EDCI 7140	Principles of Teaching	3
EDCI 7870	Elementary and Secondary Curriculum	3

Electives—12 hours (Electives must be taken outside of the student's area of concentration. It is suggested that EDAD 7000 be taken the semester prior to or during the first semester of enrollment in EDCI 8100.)

Dissertation—6 to 15 hours

EDCI 8100	Doctoral Dissertation	
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Once students begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, students register in "Dissertation Continuation" (Section 35) at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of four consecutive semesters.

*CONCENTRATION II: ELEMENTARY EDUCATION

Specialized Courses—24 hours (other courses with consent of advisor)

EDAD 5030	Instructional Leadership	3
EDCI 6100	Curriculum Planning and Programming	3
EDCI 6130	Seminar in Curriculum Design	3
EDCI 6170	Non-Traditional Education Uses of Microcomputers	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 6280	Designing Middle School Curriculum	3
EDCI 6290	Advanced Language Arts	3
EDCI 6340	Evaluation of Education Programs	3
EDCI 6820	Advanced Mathematics in the Elementary School	3
EDCI 6830	Advanced Science in the Elementary School	3
EDCI 7030	Independent Study	3
EDCI 7080	Curriculum Theory	3
EDCI 7870	The Elementary and Secondary Curriculum	3
PSYC 6130	Social Bases of Behavior	3

Electives—12 hours (Electives must be taken outside of the student's major field. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

Biology
Chemistry
Early Childhood Education
Educational Administration
English
Mathematics
Guidance K- 12
Reading
Human Performance and Sport Sciences
Social Studies

*Program is currently undergoing curricular review and may be modified.

Dissertation—6 to 15 hours

EDCI 8100	Doctoral Dissertation	
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Once students begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, students register in "Dissertation Continuation" (Section 35) at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of four consecutive semesters.

CONCENTRATION III: READING

Candidates for Ed.D. degree in Curriculum & Instruction with the Concentration Reading must have successfully completed the Master of Education degree in Reading with certification in Reading.

Specialized Courses: 12 hours—Curriculum Instruction and 12 hours—Reading Education beyond the requirements for certification as a reading specialist.

A. Curriculum and Instruction—12 hours

EDAD 6160	The Elementary School Principal	3
EDAD 6200	Organization and Administration Of the Secondary School	3
EDCI 6170	Non-Traditional Education Uses of Computers	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 7040	Comparative Education	3
EDCI 7080	Curriculum Theory	3

B. Reading Education -12 hours (Select from the list below)

EDRD 5800	Linguistic Applications to Teaching Language Arts	3
EDRD 5870	Interpreting Research Findings Into Classroom Practice	3
EDRD 6090	Teaching Adults to Read and Write	3
EDRD 6200	Directed Individual Study of Instructional Strategies in Reading	1-3
EDRD 6210	Directed Individual Study in Supervising (A,B,& C)Reading Instruction and/or Programs (can be repeated)	1-3
EDRD 6220	Directed Individual Study of Individualized (A,B,& C)Clinical Procedures	1-3
EDRD 6500	Investigating Reading and Writing Processes	3
EDRD 7100	Internship in Supervision of Reading(A,B,& C)Instruction and/or Programs	1-3

Electives—12 hours (Electives must be taken outside of the student's major field. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

Dissertation—6 to 15 hours

EDCI 8100 Doctoral Dissertation

Once students begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, students register in "Dissertation Continuation" (Section 35) at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of three consecutive semesters.

Persons pursuing this Concentration may be preparing for the following positions:

- Curriculum Planners
- Guidance Counselors
- Directors
- School Psychologists
- Educational Administrators
- Classroom Teachers
- Elementary Supervisors
- Secondary Remedial/Clinical Specialists

CONCENTRATION IV: SECONDARY EDUCATION

Specialized Courses—24 hours (other courses with consent of advisor)

SOCI 5200	Education Sociology	3
EDAD 5030	Instructional Leadership	3
EDAD 6200	Organization and Administration Of the Secondary School	3
EDCI 6100	Curriculum and Planning and Programming	3
EDCI 6130	Seminar in Curriculum Design	3
EDCI 6170	Non-Traditional Education Uses of Computers	3
EDCI 6190	Microcomputers and Educational Services	3
EDCI 6200	Instructional Applications of Word-Processing	3
EDCI 6280	Advanced Language Arts	3
EDCI 6340	Evaluation of Education Programs	3
EDCI 7020	Doctoral Seminar in Curriculum	3
EDCI 7030	Independent Study	3
EDCI 7080	Curriculum Theory	3
EDCI 7110	Seminar Instruction	3
EDCI 7140	Principles of Teaching	3

Electives—12 hours (taken outside the department. It is suggested that EDAD 700 be taken immediately prior to or during the first semester of enrollment in EDCI 810.)

Dissertation—6 to 15 hours

EDCI 8100 Doctoral Dissertation

Once students begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, students register in "Dissertation Continuation" (Section 35) at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of four consecutive semesters.

CONCENTRATION V: SPECIAL EDUCATION

Specialized Courses:

A. Major Core Required in EDCI (12 Hours)

EDAD 5030	Instructional Leadership	3
EDCI 6170	Non-Traditional Education Uses of Microcomputers	3
EDCI 6200	Instructional Applications of Word Processing	3
EDCI 6100	Curriculum Planning	3
EDCI 6130	Seminar in Curriculum	3
EDCI 7080	Curriculum Theory	3
EDCI 7020	Doctoral Seminar in Curriculum	3
EDCI 7030	Doctoral Independent Study	3
EDCI 7110	Seminar in Instruction	3

B. Special Education—(12 Hours)

EDSE 5070	Teaching the Emotionally Disturbed Child	3
EDSE 5100	Multicultural/Bilingual Exceptional Student	3

EDSE 5700	Curriculum, Methods, and Materials for Multicultural/Bilingual Special Education	3
EDSE 5730/6730	Assessment of Exceptional Multicultural/Bilingual Population	3
EDSE 5810/6810	Cultural Pluralism & Language Disorders	3
EDSE 5820/6820	Cultural Diversity & Behavior Disorders	3
EDSE 6370	Characteristics and Strategies for the Physically Challenged	3
EDSE 6520	Org./Admin. Of Program and Services For the Disabled	3
EDSE 6530	Education and Psychology of Exceptional Child	3
EDSE 6540	Theory and Procedures for Teaching The Exceptional Child	3
EDSE 6560	Psycho-educational Diagnosis of the Exceptional Child	3
EDSE 6570	Consultation and Collaboration	3
EDSE 6580	Learning and Behavioral Disabilities	3
EDSE 6590	Characteristics and Needs of the Gifted	3
EDSE 6600	Teaching the Gifted	3
EDSE 6630	Teaching Early Childhood Special Education	3
EDSE 5640	Managing Inappropriate Classroom Behavior	3
EDSE 5680	Teaching Academics to the Mildly Disabled	3
EDSE 5690	Managing Transitions for Exceptional Children	3
EDSE 5710	Teaching Individuals with Severe Disabilities	3
EDSE 5800	Technology in Special Education	3
EDSE 6900	Practicum in Special Education	3
EDSE 6910	Problems and Projects in Special Education	3
EDSE 6920	Problems and Projects in Special Education	3
EDSE 6930	Problems and Projects in Special Education	3
EDSE 7915	Seminar in Special Education/ Selected Topics	3
EDSE 7916	Seminar in Special Education/ Selected Topics	3
EDSE 7917	Seminar in Special Education/ Selected Topics	3
EDSE 7918	Seminar in Special Education Selected Topics	3

Electives—12 hours (taken outside the department. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

Dissertation—6 to 15 hours

EDCI 8100	Doctoral Dissertation
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Once students begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, students register in "Dissertation Continuation" (Section 35) at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of four consecutive semesters.

**MAJOR: CURRICULUM AND INSTRUCTION
DEGREE: MASTER OF EDUCATION (M.Ed.)**

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

Students who are potential candidates for the Master's Degree in Curriculum and Instruction must be certified to teach or must meet certification before the degree is awarded. Exceptions are the concentrations in Adult Education, Educational Technology, and Teaching Non-English Background Students (NELB).

Degree Requirements

The Master's Degree program in Curriculum and Instruction offers concentrations in Secondary School Instruction, Adult Education, Reading, Educational Technology, Teaching Non-English Language Background Students, and History and Geography.

PROGRAMS OF STUDY

Required Core—15 hours

EDCI 5000	Foundations of Education	3
	or	
EDCI 5260	Philosophy of Education	3
EDCI 5110	Research and Statistics in Education	3
EDCI 6100	Curriculum and Planning and Programming	3
EDCI 5300	Multicultural Education	3
PSYC 5430	Advanced Educational Psychology	3

CONCENTRATION: SECONDARY SCHOOL INSTRUCTION—18 suggested hours (courses other than those listed below may be taken with consent of the advisor)

EDCI 5340	Evaluation of Education Programs	3
EDCI 5250	Seminar in Secondary Education	3
EDCI 5860	Values Education	3

EDCI 6130	Seminar in Curriculum	3
EDCI 5280	Middle School Curriculum	3
EDCI 6190	Microcomputers and Educational Services	3

CONCENTRATION: ADULT EDUCATION—18 suggested hours (courses other than those listed below may be taken with consent of the advisor)

EDAD 5040	The Adult Learner	3
EDAD 5180	Principles and Techniques for Teaching Adults	3
EDAD 5350	Parental Involvement Education	3
EDCI 5390	Community Resources for The Elderly	3
EDAD 5490	Aspects of Aging	3
EDRD 6500	Reading and Writing for School Administrators K-12	3
EDRD 6090	Teaching Adults to Read and Write	3

CONCENTRATION: READING—18 hours

(An emphasis on middle school or secondary school reading is available.)

Middle School Emphasis

Professional Educational Core—9 Hours

EDCI 5110	Research and Statistics	3
EDCI 5260	Philosophy of Education	3
PSYC 5430	Advanced Educational Psychology	3

Concentration: Reading Education—9-10 Hours

EDRD 5610	The Teaching of Reading in Grades K-8	3
EDRD 5640	Diagnosis and Treatment of Reading Disabilities	3
EDRD 5690	Practicum in Reading Education	3
EDRD 5800	Linguistic Applications to Teaching Language Arts	3
EDRD 6030	Reading-Language Arts Curriculum in Elementary, Middle, and Secondary Schools	3
EDRD 6050	Strategies for Developing Reading-Study Skills in Middle and Secondary Schools	3
EDRD 6120	Current Trends and Issues in Reading-Language Arts Education	3
EDRD 6200	Directed Individual Study of Instructional Strategies in Reading	1-3

Secondary School Emphasis

Professional Educational Core—9 Hours

EDCI 5110	Research and Statistics	3
EDCI 5260	Philosophy of Education	3
PSYC 5430	Advanced Educational Psychology	3

Concentration: Reading—9-10 Hours

EDRD 5800	Linguistic Applications to Teaching Language Arts	3
EDRD 6030	Reading-Language Arts Curriculum in Elementary, Middle, and Secondary Schools	3

EDRD 6050	Strategies for Developing Reading-Study Skills In Middle and Secondary Schools	3
EDRD 6090	Teaching Adults to Read and Write	3
EDRD 6120	Current Trends and Issues in Reading-Language Arts Education	3
EDRD 6200	Directed-Individual Study of Instructional Strategies in Reading	1-3

Major Field Core—15 Hours (to be selected from the Secondary School Instruction Concentration)

CONCENTRATION: EDUCATIONAL TECHNOLOGY—18 hours

EDCI 6180	Microcomputers for Primary & Elementary Schools	3
EDCI 6190	Microcomputers and Educational Services	3
EDCI 5730	Audio Visual Education	3
EDCI 5920	Problems and Projects in Education Guided Electives (6 hours)	3
EDAD 6100	Computer Applications for Educational Leaders	3
EDAD 6060	The Administration of Instructional Programs and Materials	3
COMP 5050	Advanced Computer Programming	3
MATH 5730	Logic I	3

CONCENTRATION: TEACHING NON-ENGLISH BACKGROUND (NELB) STUDENTS—12 hours

EDCI 5010	Issues in Bilingual Education & Second Language Acquisition	3
ENG 5130	Teaching English to Speakers of Another Language, I	3
ENG 5140	Teaching English to Speakers of Another Language, II	3
EDCI 5920	Problems & Projects in Education (Supervised Teaching in ESL)	3

NELB Guided Electives (6 hours)

EDCI 5020	Teaching English Structure to Non-Native Speakers of English	3
EDCI 5030	Teaching and Assessment of Non-Native Speakers of English	3
EDCI 5800	Linguistics Applications to Teaching Language Arts	3
EDCI 5100	History of the English Language	3
SOCI 5280	Cultural Anthropology	3

Other electives may be taken with consent of advisor.

(Hours other than those listed here may be taken with the consent of advisor and may include hours in the content area of certification.)

CONCENTRATION:**History and Geography (see Arts and Sciences section of Catalog)****MAJOR: ELEMENTARY EDUCATION****DEGREE: MASTER OF EDUCATION (M.Ed.)****Admission Requirements**

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

Students who are potential candidates for the Master's Degree in Elementary Education must be certified to teach or must meet certification requirements before the degree is awarded.

Degree Requirements

Candidates for the Master of Education degree must take a minimum of thirty-three (33) semester hours of course work and must successfully pass comprehensive examinations in the fields of general education and elementary education.

PROGRAM OF STUDY**Professional Education Core—9 hours**

EDCI 5000	Foundations of Education	3
OR		
EDCI 5260	Philosophy of Education	3
EDCI 5110	Research and Statistics in Education	3
PSYC 5430	Advanced Educational Psychology	3

Specialized courses—18 hours

The candidate must complete 18 semester hours of courses related to elementary education. Courses selected must include at least two methods courses and EDRD 5610.

EDCI 5270	Advanced Social Studies	3
EDCI 5290	Advanced Language Arts	3
EDCI 6340	Evaluation of Education Programs	3

EDCI 5820	Advanced Mathematics in the Elementary School	3
EDCI 5830	Advanced Science in the Elementary School	3
EDCI 5860	Values Education	3
EDCI 6100	Curriculum Planning and Programming	3
EDCI 6150	Seminar in Curriculum Development	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 6300	Multicultural Education	3

Electives with consent of the advisor—6 hours**CONCENTRATION:****EARLY ELEMENTARY AND MIDDLE SCHOOL READING**

EDRD 5610	Teaching Reading K-8	3
EDRD 5640	Diagnosis and Treatment of Reading Disabilities	3
EDRD 5690	Practicum in Reading Education	3
EDRD 5800	Linguistic Applications to Teaching Language Arts	3

Electives—6 (Consent of Advisor)**MAJOR: SPECIAL EDUCATION****DEGREE: MASTER OF EDUCATION (M.Ed.)**

The Special Education program provides students with courses and experiences designed to prepare competent professionals facilitators of learning with a multicultural perspective to serve in various educational capacities. Graduates are prepared to serve as classroom teachers, and to serve as professionals employed by hospitals, group homes, mental health centers, and other community service agencies, both public and private, serving individuals with disabilities.

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

PROGRAMS OF STUDY

Students in the M.Ed. degree in Special Education must complete 33 semester hours and pass comprehensive examinations in general education and special education. Students take the 9 hours required from the professional core and choose 24 additional hours in Special Education. Students intending also to be licensed to teach special education should select courses from those required for licensure, and must complete 6-12 hours supervised student teaching or internship.

Students seeking initial teacher licensure must satisfy requirements for admission to Teacher Education before completion of twelve semester hours of course work.

Required Professional Education Core—9 hours

EDSE 5530	Education and Psychology of Exceptional Children	3
EDCI 5260	Philosophy of Education	3
EDCI 5110	Research and Statistics in Education	3
OR		
EDAD 5110	Educational Research for the Practitioner	3

Specialized Core Courses Required for Licensure

EDSE 5540	Theory and Procedures for Teaching Exceptional Children	3
EDSE 5560	Psycho-Educational Diagnosis of the Exceptional Child	3
EDSE 5570	Consultation and Collaboration	3
EDSE 5580	Learning and Behavioral Disabilities	3
EDSE 5600	Teaching the Gifted	3
EDSE 5640	Managing Inappropriate Classroom Behavior	3
EDSE 5680	Teaching Academics to the Mildly Disabled	3
EDSE 5690	Managing Transitions of Exceptional Persons	3
EDSE 5800	Technology in Special Education and Rehabilitation	3
*EDSE 5950	Student Teaching (12 hours for initial license; 6 hours for an add-on endorsement in Special Education)	6-12
*EDSE 5960	Internship in Special Education	6-12

(*EDCI 4700 must be taken concurrently with either of these courses.)

With the 9 hours from the required professional core above, and 24 hours from one of the two options listed below, the credit hour requirement for the master's degree are met. Option A is for those who are licensed in another area and wish to add special education to the license. Option B is for students who have no teaching license.

A. The Endorsement Curriculum is for persons adding Special Education Modified K-12 to an existing Tennessee professional teaching license.

EDSE 5530	Education and Psychology of Exceptional Children	3
EDSE 5540	Theory and Procedures for Teaching Exceptional Children	3
EDSE 5560	Psycho-Educational Diagnosis of the Exceptional Child	3
EDSE 5570	Consultation and Collaboration	3
EDSE 5580	Learning and Behavior Disabilities	3

EDSE 5640	Managing Inappropriate Classroom Behavior	3
EDSE 5680	Teaching Academics to the Mildly Disabled	3
EDSE 5690	Managing Transitions of Exceptional Persons	3
EDSE 5800	Technology in Special Education and Rehabilitation	3
EDSE 5900	Practicum in Special Education	3
OR		
*EDSE 5950	Student Teaching with Exceptional Children	6-12
OR		
*EDSE 5960	Internship in Special Education	6-12

(*EDCI 4700 must be taken concurrently with either of these courses.)

B. The Post-Baccalaureate Curriculum is for those who do not hold a valid professional Tennessee teaching license. Those seeking licensure must have a transcript analysis done by the Office of Teacher Education, and must be admitted to Teacher Education before enrolling in these courses.

Required Courses:

EDSE 5530	Education and Psychology of Exceptional Children	3
EDSE 5540	Theory and Procedures for Teaching Exceptional Children	3
EDSE 5560	Psycho-Educational Diagnosis of the Exceptional Child	3
EDSE 5570	Consultation and Collaboration	3
EDSE 5580	Learning and Behavior Disabilities	3
EDSE 5640	Managing Inappropriate Classroom Behavior	3
EDSE 5680	Teaching Academics to the Mildly Disabled	3
EDSE 5690	Managing Transitions of Exceptional Persons	3
EDSE 5800	Technology in Special Education and Rehabilitation	3
EDRD 5610	Teaching Reading in Elementary School	3
OR		
EDRD 6050	Strategy for Developing Reading	3
*EDSE 5950	Student Teaching of Exceptional Children	6-12
OR		
*EDSE 5960	Internship in Special Education	6-12

(*EDCI 4700 must be taken concurrently with either of these courses.)

MAJOR: ADVANCED STUDIES IN TEACHING AND LEARNING DEGREE: MASTER OF EDUCATION (M.Ed.)

The mission of this Regents Online Degree Program (RODP) Master's Degree program in Education is to provide advanced professional preparation in the area of reading and language arts for licensed practicing teachers. Further, this entirely online program is based on the assumption that all course content and learning experiences will be based on the student's work as a classroom teacher. All courses include assignments that teachers carry out in their own classrooms.

The RODP Master's Degree program is aligned with National Board for Professional Teaching Standards (NBPTS) core propositions. The program is built around a core of proficiencies that are consistent across most National Board for Professional Teaching Standards certificates. In addition, it includes coursework focused on pedagogical content proficiencies related to teaching Reading-Language Arts. This design allows teachers to receive advanced professional preparation consistent with NBPTS principles and is supportive of achieving NBPTS certification in Early and Middle Childhood/Literacy: Reading-Language Arts. Since the core is aligned with NBPTS generalist certificates, this program also support teachers who seek NBPTS certification in any of the generalist areas as well. This design is flexible in that it allows other NBPTS certification areas to be included by changing the pedagogical content focus.

For more information about this program, refer to the RODP Web site at www.tn.regentsdegrees.org.

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 870 on the verbal, quantitative, and subject portions of the Graduate Record Examination or a score of 370 on the Miller Analogies Test.

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 2.49, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

Students who are potential candidates for the Master's Degree in Advanced Studies in Teaching and Learning must be certified teachers currently teaching in a classroom.

COURSE DESCRIPTIONS

EDCI 5010. ISSUES IN BILINGUAL EDUCATION AND SECOND LANGUAGE ACQUISITION. (3) Current research on bilingual education, language development, and second-language acquisition from the fields of sociolinguistics and psycholinguistics. Emphasis on factors affecting development of skills in English as a second or foreign language.

EDCI 5020. TEACHING ENGLISH STRUCTURE TO NON-NATIVE SPEAKERS OF ENGLISH. (3) Advanced aspects of English grammar for teachers of English as a second or foreign language. Emphasis on comparative analysis of English grammatical structure, problems encountered by non-native speakers in learning English grammar, and methods for addressing these difficulties.

EDCI 5030. TESTING AND ASSESSMENT OF NON-NATIVE SPEAKERS OF ENGLISH. (3) Linguistic, cultural, educational, legal, and logistical aspects of assessing the educational needs of non-native speakers of English. Emphasis on culturally-sensitive, legally-defensible, and pedagogically-sound assessment and evaluation techniques.

EDCI 5110. RESEARCH AND STATISTICS IN EDUCATION. (3) A course designed to introduce the student to different methods of conducting research, as well as to educate the student in planning an original piece of

research and developing a proposal for the research. A critical analysis is made of various types of research and the various manuals of acceptable styles for writing. Elementary statistics, analysis, and interpretation of data are included.

EDCI 5260. PHILOSOPHY OF EDUCATION. (3) A critical examination of the purpose of education in our elementary and secondary schools and the bearing of this purpose on problems of organization and administration, the selection of subject matter, and classroom practice. Consideration will be given to the significance of our education purpose and practice to our concept of a democratic society.

EDCI 5270/6270. ADVANCED SOCIAL STUDIES. (3) Designed for students who desire to explore newer practices and materials for the social studies program in elementary schools.

EDCI 5280/6280. DESIGNING MIDDLE SCHOOL CURRICULUM. (3) Focused on school programs that are responsive to and effective for students in the early adolescent (11-15 years) range. Organization, evaluation, curricula, and processes for implementation. For teachers, administrators, counselors, supervisors, and curriculum directors.

EDCI 5290/6290. ADVANCED LANGUAGE ARTS. (3) A study of current trends and practices in teaching the language arts in elementary.

EDCI 5300/6300. MULTICULTURAL EDUCATION. (3) The course is designed to aid educators in becoming aware of, understanding and being sensitive to the needs and interests of ethnic and cultural groups, the underlying philosophy being that the differences and similarities that characterize individuals and groups should be cherished for their worth and cultivated for the benefits they bring all people.

EDCI 5310. IN-SERVICE EDUCATION WORKSHOPS. (3) This course is designed to provide in-service personnel with opportunities to make an in-depth study of some area or a combination of areas involving contemporary problems and issues in education. This course is primarily designed to be concentrated into short periods of time for intensive study. Some of the areas covered are developing instructional modules, urban education, dealing with exceptional students in the classroom, instructional media, etc. (Does not count toward a degree, but the credits are acceptable by the State Department of Education for certificate renewal and a 30 plus program beyond a master's degree)

EDCI 5315. OBSERVATION (3). This course is designed to meet observational requirements mandated by the National Council on Teacher Education (NCATE). Enrollment in this course and the observations in public school classrooms stipulated for students seeking initial licensure meet this requirement.

EDCI 5340/6340. EVALUATION OF EDUCATION PROGRAMS. (3) An examination of the development, interpretation, and use of standardized criterion references, and other procedures and instruments for appraising individual and group progress, including processes for evaluating the total school program, including personnel and facilities. Designed for curriculum and supervisory students to acquire knowledge of various program evaluation approaches, experience applying selected existing models, conceptualize new instrumentation for unique programmatic concerns, and practice data collection, organization, analysis, and presentation.

EDCI 5350. INTERNSHIP IN SECONDARY SCHOOL. (3-9) Designed for those students seeking licensure but are already teaching in a State-approved K-12 school. Prerequisite: Passing scores on the Praxis II examinations.

EDCI 5360. INTERNSHIP IN ELEMENTARY SCHOOL. (3-9) Post-baccalaureate students teaching in a State approved elementary school on an alternative license may enroll in this course in lieu of student teaching. Prerequisite: Passing scores on the Praxis II examinations.

EDCI 5715. ADVANCED METHODS OF TEACHING FOR SECONDARY TEACHERS. (3) Designed for students with desire to explore practices and materials for programs in secondary school instruction.

EDCI 5730. AUDIOVISUAL EDUCATION. (3) Analysis of the development and function of audio-visual programs in schools. Includes problems of organization, selection, and utilization of materials and equipment, unit costs, and school plant requirements. Some laboratory experience is required.

EDCI 5820/6820. ADVANCED MATHEMATICS IN THE ELEMENTARY SCHOOL. (3) Current developments in elementary science programs. Em-

phasis is placed on of "modern math," curriculum, classroom methods and techniques, evaluation procedures, and teacher training.

EDCI 5830/6830. ADVANCED SCIENCE IN THE ELEMENTARY SCHOOL. (3) Current developments in elementary science program. Emphasis is placed on examination of new curriculum materials, developmental activities, research, and involvement in learning experiences appropriate for the elementary for the elementary school.

EDCI 5860/6860. VALUES EDUCATION. (3) A course designed for classroom teachers that emphasizes teaching strategies, methods, and techniques of the three approaches to values education: 1. Analysis, 2. Clarification, and 3. Cognitive Moral Development of Values Education.

EDCI 5910, 5920, 5930. PROBLEMS AND PROJECTS IN EDUCATION. (3) Students may register for one-to-three special projects in education under the direction of an appropriate member of the College.

EDCI 5950. SEMINAR IN MULTICULTURAL EDUCATION. (3) A study of concerns and problems related to the education of culturally different and educationally neglected students form the major ethnic and racial groups in the United States; the administrative and supervisory facets of these concerns, and problems and modification in curriculum necessary in the development of supportive programs.

EDCI 6100. CURRICULUM PLANNING AND PROGRAMMING. (3) An examination of the factors which determine curriculum, the meaning of curriculum, the involvement of students in the process of developing a cleaner educational belief system (curriculum frame of reference), and the planning of curricula that have high levels of consistency and personal commitment. Included is the exploration of the relationships between curriculum determinants, human growth, and curriculum planning.

EDCI 6130. SEMINAR IN CURRICULUM DESIGN. (3) An examination of the skills and understandings related to designing, constructing, and improving the curriculum. Utilizing problem-solving approaches, the effective procedures and practices used by persons in curriculum leadership positions are explored and experienced.

EDCI 6150. SEMINAR IN CURRICULUM DEVELOPMENT. (3) Seminars designed to provide in-depth exploration of specific topics, current issues, and trends of significant value to graduate students in their professional development.

EDCI 6170. NON-TRADITIONAL EDUCATION USES OF MICROCOMPUTERS. (3) The parent's role in selection of hardware and software is important, as well as the parents' guidance of their child's use of microcomputers. This course will address home computer use, including readiness skills, basic skills, tutoring, programming languages, and the use of games. The course includes hands-on experience, a project with a child, and parental issues. No previous computer experience is necessary.

EDCI 6180. MICROCOMPUTER TECHNOLOGY IN PRIMARY AND ELEMENTARY SCHOOLS. (3) Specific theories and methods applied to the integration of microcomputers into the curriculum for young children. Selection of the computer languages, software evaluation, and classroom management are key planning issues. The role of the microcomputer and technology will be the focus of this course on current and future uses of microcomputers in home and educational settings. Lectures, discussions, and demonstrations in early childhood/elementary classes will be supplemented by hands-on learning/teaching experiences using microcomputers. No previous computer experience is necessary.

EDCI 6200. INSTRUCTIONAL APPLICATIONS OF WORD-PROCESSING. (3) This course will explore issues and techniques for using word-processing appropriately in the elementary grades. The student will learn how to create, edit, save, and print documents while working with children, and on personal correspondence, reports, and technical papers. In this "hands-on" course using three different microcomputer systems, nor previous experience with computers is necessary.

EDCI 7000. FOUNDATIONS OF EDUCATION. (3) A critical analysis is made of the sociological, psychological, and philosophical foundations of education. A survey of approaches of professional ethics will be included in the treatment of philosophy.

EDCI 7020. DOCTORAL SEMINAR IN CURRICULUM. (3) Designed for advanced doctoral students to identify and focus on elements and dimensions of curriculum. Students will be responsible for designing, developing, and presenting their personal positions on theory, problems, and practices

in curriculum and instruction as related to improving educational programs and organizations.

EDCI 7030. INDEPENDENT STUDY. (3) The student and instructor mutually agree on a topic that is independently conducted by the student. The culminating activity of the course is a paper or project.

EDCI 7080. CURRICULUM THEORY. (3) A course that explores the historical development of curriculum theory and the evolutionary process that leads to contemporary curricula today.

EDCI 7110. SEMINAR IN INSTRUCTION. (3) A seminar in the current issues, trends, and research in classroom instruction.

EDCI 7120. ADVANCED METHODS OF RESEARCH. (3) A course designed to expose students to the many and varied types of educational research. The content of the course and practical experience included in it will enable students to conduct educational research with skill, competence, and the necessary knowledge with which to design studies, projects, and grant proposals.

EDCI 7140. PRINCIPLES OF TEACHING. (3) Consists of a critical examination of the present data relevant to the fundamental principles of teaching. It also provides the student with an opportunity to study factors that affect teaching and teaching strategies.

EDCI 7870. THE ELEMENTARY AND SECONDARY CURRICULUM. (3) This course provides an overview of K-12 curriculum. The skills, understandings, and attitudes translated through the various instructional organizations, programs, materials, activities, resources, and teaching strategies. Effective designs will be emphasized.

EDCI 8100. DOCTORAL DISSERTATION IN CURRICULUM AND INSTRUCTION. (3-12) The successful completion of a dissertation is required for the Ed.D. student. The student may register twice for this course (partial semester hours). Credit is awarded upon the acceptance of the dissertation and the passing of the examination.

READING

EDRD 5310. IN-SERVICE EDUCATION WORKSHOPS. (1-3) Workshops designed to address a variety of reading education topics.

EDRD 6500. INVESTIGATING READING AND WRITING PROCESS. (3) Students examine psychological processes that occur during reading, as well as reasoning strategies that are necessary for comprehending written messages. An emphasis will be on reasoning strategies necessary for a reader to: (a) be able to evaluate the degree of truth in ideas expressed in various written messages and (b) be able to use ideas gained from written messages to help him/her make better decisions in daily life.

EDRD 5590. FOUNDATIONS OF TEACHING READING. (3) Survey and analysis of theory, concepts, principles, processes, practices, and materials relevant to reading programs kindergarten through adult.

EDRD 5610. THE TEACHING OF READING IN GRADES K-8. (3) Reviews the entire elementary school reading program from the reading readiness stage through junior or high grades. Emphasis on methods and materials of teaching reading in kindergarten through grade eight, and the development of higher-level skills in reading as children mature.

EDRD 5640. DIAGNOSIS AND TREATMENT OF READING DISABILITIES. (3) Investigation of common causes of reading disabilities, diagnosis of such disabilities by individual and group procedures, and establishment of treatment programs.

EDRD 5690. PRACTICUM IN READING EDUCATION. (3) A practical experience will be designed by the pupil and the instructor after an analysis of the pupil's needs as his job tasks relate to reading. Different experiences (as examples) could emphasize classroom instruction, remedial-clinical instruction, screening pupils for special programs, supervising reading teachers, and designing or administering reading programs.

EDRD 5800. LINGUISTIC APPLICATIONS TO TEACHING LANGUAGE ARTS. (3) Designed to provide teachers with current theory concerning the cultural, linguistic, cognitive, and affective aspects of receptive and productive language. Theory is translated into classroom practice emphasizing the teaching of reading, writing, and spelling.

EDRD 5870. INTERPRETING RESEARCH FINDINGS INTO CLASSROOM PRACTICE. (3) Advanced seminar for graduate students. This

course emphasizes survey and review of current research in various phases of reading and their implications for instructional strategies.

EDRD 6030. READING-LANGUAGE ARTS CURRICULUM IN ELEMENTARY, MIDDLE, AND SECONDARY SCHOOLS. (3) An examination of curriculum theory as a basis for developing reading-language arts programs. Critical evaluation of current problems as they influence management by objectives, learning experiences, organizations, and evaluations. The course will also explore the administrative implications for reading programs.

EDRD 6050. STRATEGIES FOR DEVELOPING READING-STUDY SKILLS IN SECONDARY SCHOOL. (3) Course demonstrates teaching techniques that develop advanced reading-studying strategies. Developing the ability to read for transfer of content ideas and information will be emphasized as a means for making any discipline more relevant to high school pupils and for helping them become independent learners.

EDRD 6090. TEACHING ADULTS TO READ AND WRITE. (3) The purposes of this course are to (a) sensitize the student to some of the problems peculiar to adults in the process of learning to read, (b) suggest some practical materials and procedures acceptable to learners beyond the age of compulsory school attendance, (c) explore some techniques for teaching beginning reading, and (d) emphasize positive approaches to building feelings of success and personal satisfaction in learning to read and write.

EDRD 6120. CURRENT TRENDS AND ISSUES IN READING—LANGUAGE ARTS EDUCATION. (3) Course is designed to explore current trends and issues, including curricular structures and administrative and other school practices that affect the teaching of reading-language arts.

EDRD 6200. DIRECTED INDIVIDUAL STUDY OF INSTRUCTIONAL STRATEGIES IN READING. (1-3) Individual study of instructional strategies in reading directed by adviser or other professors. (May be repeated).

EDRD 6210. DIRECTED INDIVIDUAL STUDY IN SUPERVISING READING INSTRUCTION AND/OR PROGRAMS. (1-3) Individual study centered around supervision of reading instruction and/or programs; directed by adviser or other professors. (May be repeated).

EDRD 6220. DIRECTED INDIVIDUAL STUDY OF INDIVIDUALIZED CLINICAL PROCEDURES. (1-3) Individual study of individualized clinical procedure directed by adviser or other professors. (May be repeated).

EDRD 7020. PROVIDING IN-SERVICE FOR TEACHERS OF READING AND OTHER LANGUAGE ARTS. (3) Model programs for providing in-service in the improvement of reading-language arts instruction will be examined. Topics will include ways to make it easy for teachers to apply what they learn from in-service to classroom practice.

EDRD 7100. INTERNSHIP IN SUPERVISION OF READING INSTRUCTION AND/OR PROGRAMS. (1-3) Explores and studies at an advanced level the structure and function of reading programs at local and state levels in relation to their functions to promote literacy and to alleviate reading disability; to be taken as requirement for those pursuing the area of Reading Supervision.

EDRD 7200. INTERNSHIP IN READING CLINIC. (1-3) An advanced course. Clinical placement in approved facilities in community reading clinics. Offers experience under direction of clinician.

SPECIAL EDUCATION

EDSE 5100. MULTICULTURAL/BILINGUAL EXCEPTIONAL STUDENT: AN INTRODUCTION TO THE FIELD OF MULTICULTURAL/BILINGUAL SPECIAL EDUCATION. (3) This course is designed to provide an introduction to the field of Multicultural/Bilingual Special Education, its characteristics, issues and the representation of this group in today's classroom. Emphasis will be on several factors that affect the representation of this population in special education classrooms.

EDSE 5370/6370. CHARACTERISTICS AND STRATEGIES FOR THE PHYSICALLY CHALLENGED. (3) This course is an advanced study of the learning, behavioral, psychological, physical, medical, and social needs of the physically challenged. Strategies and educational accommodations and maintenance of the child in the least restrictive environment are integral.

EDSE 5520/6520. ORGANIZATION AND ADMINISTRATION OF PROGRAMS AND SERVICES FOR THE DISABLED. (3) This course is designed for educators and other professional personnel with the

responsibility for planning, developing, and administering programs for persons with disabilities. Legal, social, political, educational, community, parental, and funding issues are considered.

EDSE 5530/6530. EDUCATION AND PSYCHOLOGY OF EXCEPTIONAL CHILDREN. (3) A survey of issues dealing with psychology and education of exceptional children. Special attention is paid to the characteristics, etiologies, needs, and scope of each group. Observation and practical work with exceptional children is an integral part of the course.

EDSE 5540/6540. THEORY AND PROCEDURES FOR TEACHING THE EXCEPTIONAL CHILD. (3) This course extends knowledge of behavior modification, cognitive behavior modification, and eclectic approaches. Applications will be made of the following: diagnostic-prescriptive teaching, contracting, graphing, cooperative learning, peer tutoring, cognitive blending, role play, multicultural concepts, reinforcement and punishment techniques, research-validated strategies and more. Field experiences are required.

EDSE 5550. CHARACTERISTICS OF YOUNG EXCEPTIONAL CHILDREN. (3) This course addresses the characteristics and needs of children with disabilities, ages 0—8. Included topics are: psycho-social aspects, familial/multicultural, developmental, legal, and theoretical aspects. Research and field experiences are required.

EDSE 5560/6560. PSYCHO-EDUCATIONAL DIAGNOSIS OF THE EXCEPTIONAL CHILD. (3) Administration and interpretation of various psychological and educational assessment instruments. Students will be involved in actual evaluation, administration, and interpretation of tests. Test results will be used to develop goals for the individualized educational program (IEP). Field experiences. Prerequisite: EDSE 5530 and 5580 or consent of instructor.

EDSE 5570/6570. CONSULTATION AND COLLABORATION. (3) This course is an advanced course which will explore various consultative and collaborative models of teaching. Strategies that enhance the interactions between the regular education teacher, the special education consultant teacher, the resource teacher, community supports and services are the focus. Topics include communication skills team teaching, methods for inclusion/mainstreaming, parent education/home instruction programs, and research-validated approaches. Field experiences are required. Prerequisites: EDSE 553 and 554 or consent of instructor.

EDSE 5580/6580. LEARNING AND BEHAVIOR DISABILITIES. (3) Topics for this course include typical and atypical characteristics and patterns of development in physical (including reflexes), psychomotor, cognitive, social-emotional (including self-esteem), character and morality, and language areas, along with etiologies and theoretical perspectives relating to normal children and those with learning and behavior problems. The importance of early learning as a factor in variable growth and learning is stressed. Field experiences are required.

EDSE 5590/6590. CHARACTERISTICS AND NEEDS OF THE GIFTED. (3) The course addresses the characteristics and needs of gifted children, including special needs of minority gifted youngsters. Cognitive, affective, and psychosocial domains will be covered, as well as an array of alternatives for the provision of special education services. Research and field-based experiences are required.

EDSE 5600/6600. TEACHING THE GIFTED. (3) The course covers predominant theoretical approaches, teaching procedures, and education of gifted students; methods and materials for special and regular classrooms and alternative administrative arrangements; research and demonstration; and field experiences.

EDSE 5630/6630. TEACHING EARLY CHILDHOOD SPECIAL EDUCATION. (3) Using the diagnostic-prescriptive approach to teaching, various methods and materials will be covered with applications to young children and their families in areas of language, cognitive, self-help, motor, social including self-esteem and character building. Individual family service plans and on-going procedures for documenting child's progress, home-instruction program, and articulations with community agencies and other personnel involved in services to the young child. Various theories, team approaches (i.e. interdisciplinary and transdisciplinary), and treatment models will be introduced. Field experiences are required. Prerequisite: EDSE 5530, 5580, 5540, and 5550 or consent of instructor.

EDSE 5640. MANAGING INAPPROPRIATE CLASSROOM BEHAVIOR. (3) Theories, goals and intervention strategies for serving exceptional learners with mild to severe behavior disorders. Field experiences are re-

quired. Prerequisites: EDSE 5530, 5580, and 5540 or consent of instructor.

EDSE 5680. TEACHING ACADEMICS TO THE MILDLY DISABLED. (3) This course focuses on the advanced application of teaching strategies to areas such as arithmetic, language arts, health, social studies, science, community, and home instruction. The diagnostic-prescriptive model is emphasized. Curricular awareness K-12 and field experiences are required. Prerequisites: EDSE 5530, 5580, and 5540 or consent of instructor.

EDSE 5690. MANAGING TRANSITIONS FOR EXCEPTIONAL PERSONS. (3) With a brief review of the history and organization of the special education service system and with concepts of normalization, the least restrictive environment, and community involvement foremost in mind, this course focuses on models and skills necessary to successfully manage the transition of exceptional persons from one service setting to another. The transition from preschool to elementary and from school to work settings are emphasized. Field experiences are required. Prerequisites: EDSE 553 and 554 or consent of instructor.

EDSE 5700. CURRICULUM, METHODS AND MATERIALS FOR MULTICULTURAL/BILINGUAL SPECIAL EDUCATION. (3) This course is designed to provide different curriculum, strategies, techniques and methods to provide the individual special needs of the children from diverse cultural/linguistic and ethnic backgrounds in the classroom. Appropriate curriculum needs and material development will also be addressed.

EDSE 5710. TEACHING INDIVIDUALS WITH SEVERE DISABILITIES. (3) This course addresses the teaching of functional and daily living skills for the profoundly to moderately disabled; the stimulation, development, and integration of sensory-motor, perceptual, and communicative skills, and self-help abilities. Home instruction, family support, and school and community articulations are covered. Field-based experiences are required. EDSE 5530 5540 5370or 5580or consent of instructor.

EDSE 5720. MEDICAL ASPECTS OF EXCEPTIONALITY. (3) This course surveys frequently occurring medical problems that impact upon the educational programs of children with disabilities. Seizure management, preventing the spread of communicable diseases, procedures for changing ostomy bags, CPR, Heimlich, suctioning, and tube feeding are among the topics covered. Frequent prescriptions from physical and occupational therapists along with the accompanying equipment are also reviewed, and medical dilemmas and ethics presented. Research and field-based experiences are required. Prerequisites: EDSE 553, 555, and 558 or consent of instructor.

EDSE 5730/6730. ASSESSMENT OF EXCEPTIONAL MULTICULTURAL/BILINGUAL POPULATIONS. (3) This course is designed to address the formal and informal methods of assessment of Multicultural/Bilingual populations. The issues of second language acquisition, language development and language loss will also be emphasized, in order to develop and in-depth understanding of the nature of the assessment.

EDSE 5800. TECHNOLOGY IN SPECIAL EDUCATION AND REHABILITATION. (3) This course has several components: study of the various technologies utilized in Special Education and Rehabilitation; utilization of the computer for instruction, electronic communication, and instructional management; evaluation of appropriate computers and software; and utilization of theoretical perspective, goals, and intervention strategies (instructional and therapeutic) for developing and implementing computer based educational environments and aids for the individuals with disabilities and the gifted.

EDSE 5810/6810. CULTURAL PLURALISM & LANGUAGE DISORDERS. (3) This course will provide an overview of pluralistic philosophy, developing sensitivity to diversity in communication and learning cross-disciplinary application concepts.

EDSE 5820/6820. CULTURAL DIVERSITY & BEHAVIOR DISORDERS. (3) This course will address the socio-cultural perspective of diverse nature of behavior problems of children from diverse cultural/linguistic backgrounds who are identified with behavior disorders (BD). Course participants will investigate a variety of strategies and procedures that have been effective in working with children from minority backgrounds who exhibit difficulty to manage behaviors in the classroom. Participants will also research over-representation of minority children in BD programs.

EDSE 5900/6900. PRACTICUM IN SPECIAL EDUCATION. (3-12) The purpose of this course is to give students the opportunity to work under supervision with exceptional children in a classroom or community situation. It should not be used to meet the student teaching experience for the spe-

cial education teaching license. Prerequisite: Completion of course work or consent of instructor.

EDSE 5910, 5920, 5930, 6910, 6920, 6930. PROBLEMS AND PROJECTS IN SPECIAL EDUCATION. (3) Individualized projects in special education under the direction of an appropriate member of the Special Education program. May not be taken to replace methods courses. Required: Consent of instructor.

EDSE 5950. STUDENT TEACHING OF EXCEPTIONAL CHILDREN. (6-12) Observation and supervised practicum with children and youth with mild disabilities. Prerequisite: Admission to Teacher Education, and passing scores on the Praxis II examinations.

EDSE 5960. INTERNSHIP IN SPECIAL EDUCATION. (6-12) Supervised teaching experience for those currently employed as a special education teacher. Internship may only be used to substitute for student teaching. Prerequisites: Completion of all course work and Admission to Teacher Education, and passing scores on the Praxis II examinations.

EDSE 7910. SEMINAR IN SPECIAL EDUCATION. (3) Advanced review of current issues, trends, theories, and research will be discussed.

FACULTY

Department of Teaching and Learning

Marino C. Alvarez, Professor

B.A., 1968, Fort Lewis College; M.A., 1976, West Virginia University Ed.D., 1980, West Virginia University

Sumita Chakraborti-Gosh, Assistant Associate Professor

B.S., 1975, Calcutta University, Calcutta, India; B.S., 1987, Utah State University; M.A., 1979, Rabindrabharah University, Calcutta India; Ph.D., 1998, New Mexico State University

Beth Christian, Associate Professor

B.A., 1991, University of Tennessee; M.A., 1993, Middle Tennessee State University; Ph.D., 2002, Peabody College of Vanderbilt University

Charles Dickens, Professor

B.A., 1971, George Peabody College for Teachers; M.S., 1972, University of Tennessee; Ph.D., 1979, George Peabody College of Vanderbilt University

Mary B. Dunn, Professor

B.S., 1971, George Peabody College of Vanderbilt University; M.A.Ed., 1977, Tennessee State University; Ed.D., 1982, George Peabody College of Vanderbilt University

J. Ronald Groseclose, Professor and Interim Head

B.A., 1968, Emory and Henry College; M.A., 1972; Ed.D., 1974, East Tennessee State University

J. Mark Hunter, Professor and Assistant Dean

B.A., 1982, College of Charleston; M.M.A., 1983, University of South Carolina; Ed.D., 1991, Virginia Polytechnic Institute and State University

Nicole Kendall, Assistant Professor

B.S., 1999 University of Tennessee at Martin,, M.S. 2000, Peabody College of Vanderbilt University ; Ed.D, 2005, Tennessee State University.

Delores Mathis, Professor

B.A., 1967, Florida A & M; M.A., 1969, M.A., 1971, The Ohio State University, Ph.D., 1975, University of Michigan

David McCargar, Associate Professor

B.A., 1973, Michigan State University; M.S., 1975, State University of New York at Buffalo; Ph.D., 1987, University of California Los Angeles

Marcia Millet, Assistant Professor

B.A., 1984, Bennett College; M.A., 1990, The Ohio State University; Ed.D., 2005, Tennessee State University.

Judith Presley, Associate Professor and Assistant Dean of
Teacher Education and Student Services
B.S., 1969, Tennessee State University; M.S., 1974,
Tennessee State University; Ph.D., 1998, George Peabody
College of Vanderbilt

Beth Quick, Associate Professor
B.S., 1989, M.Ed., 1990, Samford University; Ed.D., 1996,
Vanderbilt University

Richard O. Renfro, Professor
B.Ed., 1961, Illinois State University; M.Ed., 1963, Illinois
State University; Ed.D., 1969, Indiana University

Carole F. Stice, Professor
B.S., 1966, Murray State University; M.S., 1968, Murray
State University; Ph.D., 1974, Florida State University

Celeste Williams, Associate Professor
B.S., 1987, Guilford College; M.S., 1995, Ed.D. 2001,
Tennessee State University



**COLLEGE OF
ENGINEERING,
TECHNOLOGY AND
COMPUTER SCIENCE**

COLLEGE OF ENGINEERING, TECHNOLOGY AND COMPUTER SCIENCE

Decatur B. Rogers, Ph.D., P.E., Dean
203 Andrew P. Torrence Hall, (615) 963-5401
Mohan J. Malkani, Ph.D., Associate Dean
230E Andrew P. Torrence Hall, (615) 963-5400

The College of Engineering, Technology and Computer Science includes the departments of Architectural and Facilities Engineering, Civil and Environmental Engineering, Electrical and Computer Engineering, Mechanical and Manufacturing Engineering, Aeronautical and Industrial Technology and Computer Science. The College has about 34 faculty full-time faculty and about 80 percent of them hold Ph.D. degrees. The Engineering Research Institute, the research arm of the College, has an average operating budget of 1.5 million dollars per year and supports about fifteen different research projects.

DEGREE PROGRAMS

Computer and Information Systems Engineering	Ph.D.
Computer and Information Systems Engineering	M.S.
Engineering	M.E.

MAJOR: COMPUTER AND INFORMATION SYSTEMS ENGINEERING (CISE)
DEGREE: DOCTOR OF PHILOSOPHY (Ph.D.)
CONCENTRATIONS:

Computer Communication and Networks
Control System and Signal Processing
Robotics and Computer Integrated Manufacturing

Satinderpaul Singh Devgan, Ph.D., P.E.
Coordinator
214F Andrew P. Torrence Hall
(615) 963-5362

The Doctor of Philosophy (Ph.D.) program in Computer and Information Systems Engineering (CISE) is a unique interdisciplinary program. It integrates the strengths of various disciplines of computer science, computer engineering, electrical engineering, mechanical/manufacturing engineering, information systems, and systems engineering. The program further provides advanced knowledge and research experiences in the following concentration areas;

Computer Communication and Networks
 Control System and Signal Processing
 Robotics and Computer Integrated Manufacturing

Goals

1. The primary goal of the Ph.D. program in Computer and Information Systems Engineering at Tennessee State University is to prepare its graduates with expertise in systems engineering approach to the development of computer based information and manufacturing systems.
2. To offer an outstanding and unique interdisciplinary Ph.D. degree program that is research-based and builds upon the educational and research expertise of existing faculty in the three concentrations and related areas.
3. To address the critical shortage of teaching and research faculty in the areas of computer communication and networks, control system and signal processing, and robotics and computer integrated manufacturing.

Admission Procedure

All students applying for admission must submit to the Graduate School: a completed Graduate Admission Application form, two copies of transcripts from all colleges and universities previously attended, and three letters of recommendation.

Admission Requirements

For admission to the Ph.D. in CISE program, the student must have a:

1. A Bachelor of Science degree in engineering or computer science from an accredited program or a Master of Science in CISE, or a Master of Engineering or a M. S. degree in a closely related area.
2. Student with a B.S. degree and/or Masters degree(s) from foreign universities must submit a Certificate of Proficiency in English or a minimum score of 550 or equivalent on the Test of English as a Foreign Language (TOEFL).
3. In addition to the above, the student must have a cumulative grade point average (GPA) of 3.00 or above on a 4.00 scale for a B.S. degree graduate while a Master of Engineering or a Master of Science in CISE or a closely related M.S. degree graduate must have a 3.30 grade point average on a 4.00 scale. In addition the student must have above average grades in all of the prerequisite courses in related mathematics, engineering science, communication systems, computer hardware and computer science courses. If an evaluation of a student's transcripts reveals course or prerequisite deficiencies, the student must eliminate all deficiencies by satisfactorily completing each of the prerequisite courses prescribed before unconditional status is achieved and before completing nine (9) graduate credit hours. Student must file a letter of intent to pursue the Ph.D. degree to the Coordinator of the Ph. D. program after receiving unconditional status. None of the

courses used to eliminate undergraduate deficiencies will be used to meet degree requirements.

Transfer Credits

Transfer students with Masters degrees and beyond may transfer up to a maximum of 24 credit hours of equivalent courses towards required and/or elective courses.

Major Advisor

Initially the Coordinator of the Ph.D. program will serve as an academic advisor for all new students entering the program. Each student in the Ph.D. program is expected to select a major advisor by the beginning of the second year. All major advisors must hold tenure or tenure-track full-time graduate faculty positions.

Ph.D. Advisory Committee

A Ph.D. Advisory Committee will consist of four (4) graduate faculty from the student's program with the major advisor as its chairperson. The Ph.D. Advisory Committee will be recommended by the major advisor, with input from the student, to the Coordinator of the Ph.D. program, for approval by the Dean of the College of Engineering, Technology and Computer Science and the Dean of Graduate Studies. Upon the student's completion of core courses and selection of a concentration, this Ph.D. Advisory Committee will review the student's prior transcripts, evaluate and recommend any transfer credits, and prepare a program of study for approval by the Coordinator of the Ph.D. program and the Dean of College of Engineering, Technology and Computer Science before submission to the Dean of Graduate Studies. The Committee will supervise the student's program, administer dissertation review and approval, and finally recommend the awarding of the degree.

Retention

Students must maintain a cumulative grade point average (GPA) of 3.00 or better on the scale of 4.00, and pass all pass/fail courses throughout the program to remain in good academic standing.

Students must have a grade of B or better in all core courses and may not have more than two C grades in other courses used to meet degree requirements. After completion of nine (9) semester hours of graduate work, if the student's cumulative GPA at the end of a given semester falls below 3.00, the student will be placed on academic probation for the next semester and must satisfy the existing University requirements to return to good academic standing. Students may be dismissed from the program upon recommendation of the Ph.D. Advisory Committee for continued probation beyond two consecutive semesters.

Comprehensive Written Examination

This is a written examination designed to evaluate the student's readiness to advance to candidacy status. It is scheduled after the student has met all of the core courses and major area required and elective course requirements specified in the student's program of study and upon the recommendation of the student's major advisor. The comprehensive examination committee will develop the written examination. This is an ad hoc committee consisting of at least three (3) graduate faculty in the program and is appointed by the Coor-

dinator of the Ph.D. program in CISE, upon the recommendation of the major advisor. This committee will determine the passing performance and inform the student, the Coordinator, and the student's major advisor of the final outcome of the examination. The comprehensive written examination will consist of questions from the core, the student's area of study and the knowledge considered essential background for the dissertation research.

Students who pass the comprehensive written examination and meet all other requirements for candidacy for the Ph.D. degree in CISE will receive written confirmation of the status of their candidacy from the Dean of Graduate School. Students who fail the examination may take it again after at least one semester. Students who fail the examination after two attempts will be dropped from the program. Students in the Ph.D. program with good standing who do not plan to pursue the Ph.D. degree may seek to meet the M.S. in CISE or the Master of Engineering degree requirements of the University.

Oral Defense of Dissertation Proposal

The dissertation proposal is submitted to the student's major advisor and the Ph.D. Advisory Committee for review. The committee will make recommendations as needed. The proposal must be orally defended by the candidate before the advisory committee, and it must be accepted by the committee. A signature of the committee members on the dissertation proposal constitutes approval to proceed with thesis research. Only after approval of the dissertation proposal may the student register for the CISE 790 Ph.D. Dissertation course.

Admission to Candidacy for Ph.D. Degree in CISE

Admission to candidacy for Ph.D. degree in CISE will require compliance with all existing Graduate School policies such as;

1. Completion of all core and concentration courses approved for the student's program of study.
2. A minimum cumulative GPA of 3.0 or better,
3. Successful passing of Comprehensive Written Examination, and
4. Successful oral defense of dissertation proposal.

Degree Requirements

The student must successfully complete the approved program of study with a minimum cumulative GPA of 3.0 or better.

1. After the approval of the dissertation proposal, student must complete dissertation research and submit completed dissertation to the advisory committee for approval.
2. Upon approval by the advisory committee and the graduate school, the student must defend the research before the advisory committee and a public seminar before the faculty, students, alumni and/or industrial representatives.
3. Upon successful defense of research, presentation of the written dissertation, and approval by the Coordinator of the Ph.D. program and the Graduate School, the major advisor with the consent of the Ph.D. Advisory Committee will initiate recommendation for awarding of the degree.

Other Requirements

Other requirements such as residency, maximum class load, transfer of credits, time limits for credits and preparation of dissertation will comply with all existing policies of the University, the College of Engineering, Technology and Computer Science, and the Graduate School as listed in the Graduate Catalog.

Curriculum Description

This program requires a minimum of seventy-two (72) graduate semester credit hours beyond the bachelor's degree for the Ph.D. degree in CISE. Students with master's degree in a related field may transfer up to a maximum of 24 semester credit hours of the equivalent courses for this degree. However, if a student lacks certain prerequisites or course requirements, the student may be asked to take additional courses before the required graduate courses. The program in CISE is unique and interdisciplinary because it has a core requirement that provides the necessary foundation to computer based systems integration.

Program of Study

The curriculum consists of 51 credit hours of course work and 21 credit hours of research dissertation. The course work consists of eighteen (18) credit hours of core courses and eighteen (18) credit hours of concentration, and fifteen (15) credit hours of guided electives. All graduate students must attend graduate seminars for at least two semesters.

Required Core Courses (18 semester credit hours)

CISE 5010	Data Structures and Algorithms	3
CISE 5020	Computer Architecture and Operating Systems	3
CISE 5030	Software Systems Design	3
CISE 5040	Systems Engineering	3
CISE 5220	Computer Aided Systems Design	3
CISE 5230	Computer Communications and Networks I	3

Concentration and Electives (33 semester credit hours)

Suggested courses in each of the three areas of concentration to be selected by student's Ph.D. Advisory Committee and approved by the Program Coordinator and the Dean of the College of Engineering, Technology and Computer Science.

Computer Communication and Networks

CISE 5110	Intro. to Artificial Intelligence	3
CISE 5200	Probability, Random Processes and Estimation Theory	3
CISE 5240	Management of Information Systems	3
CISE 6000	Database Management Systems	3
CISE 6100	Optimization in Operations Research	3
CISE 6340	Computer Communication and Networks II	3
CISE 6360	Distributed Computing Theory and Design	3
CISE 6440	Numerical Visualization	3
CISE 7100	System Modeling and Simulation	3
CISE 7300	Network Programming	3
CISE 7310	Metrics and Models in Software Quality Engr.	3
CISE 7340	High Performance Computing Applications	3
CISE 7350	Network Security and Risk Analysis	3
CISE 7370	Optical Communication	3

EECE 5230	Digital Image Processing	3
ENGR 5070	Object Oriented Programming for Engrs.	3

Control System and Signal Processing

CISE 5110	Intro. to Artificial Intelligence	3
CISE 5300	Fundamentals of Robotics	3
EECE 5220	Modern Signal Processing	3
EECE 5230	Digital Image Processing I	3
EECE 5640	Advanced Topics in Control Systems	3
EECE 6220	Robust Control Theory	3
EECE 6230	Nonlinear Control Systems	3
EECE 6250	Digital Spectral Analysis	3
EECE 6260	Pattern Recognition and Classification	3
EECE 7200	Statistical Signal Processing	3
EECE 7220	Intelligent Control Systems	3
EECE 7230	Adaptive Filtering and Stochastic Control Systems	3
CISE 7240	Computer Vision	3
CISE 7420	Advanced Robotics	3
CISE 7450	A. I. Robotics	3
ENGR 5100	Methods of Applied Math for Engr.	3
ENGR 5070	Object Oriented Programming for Engr.	3
ENGR 5200	Modeling and Simulation of Dynamic Sys.	3
CISE 7506	Special Topics	3

Robotics and Computer Integrated Manufacturing

MEEN 5010	Introduction to Manufacturing	3
MEEN 5040	Vibration Analysis	3
MEEN 5130	Flexible Manufacturing Systems	3
MEEN 5430	Intro. to Computational Fluid Dynamics	3
MEEN 5610	Computer Aided Design and Manufacturing	3
MEEN 5620	Design for Manufacturability	3
MEEN 5630	Manufacturing Quality Control and Managem.	3
MEEN 5640	Manufacturing Modeling and Simulation	3
MEEN 5650	Predictive and Preventive Maintenance	3
MEEN 5660	Concurrent Manufacturing	3
ENGR 5100	Methods of Applied Math for Engrs.	3
ENGR 5070	Object Oriented Programming for Engr.	3
ENGR 5200	Modeling and Simulation of Dynamic Syst.	3
CISE 5300	Fundamentals of Robotics	3
CISE 6400	Fundamentals of Robotics in Manufacturing	3
MEEN 6430	Manufacturing Diagnosis and Prognosis Tech.	3
CISE 6440	Numerical Visualization	3
MEEN 6450	Transport Phenomena in Manufacturing	3
CISE 7420	Advanced Robotics	3
CISE 7430	Mechatronics Systems	3
CISE 7450	A.I. Robotics	3
CISE 7507	Special Topics	3

Ph.D. Dissertation (21 semester credit hours)

CISE 7900	Ph.D. Dissertation	21
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Seminar (0 semester credit hours registration for two semesters is required)

CISE 7600	Seminar	0
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MAJOR: ENGINEERING
DEGREE: MASTER OF ENGINEERING (M.E.)
CONCENTRATIONS:
Biomedical Engineering
Civil Engineering
Environmental Engineering
Electrical Engineering
Mechanical Engineering
Manufacturing Engineering

The College of Engineering, Technology and Computer Science offers work leading to the Master of Engineering (M.E.) degree with six concentrations: Biomedical Engineering, Civil Engineering, Environmental Engineering, Electrical Engineering, Mechanical Engineering, and Manufacturing Engineering.

The Master of Engineering degree requires

1. admission of all degree seeking students to candidacy for the degree after the completion of nine (9) graduate credit hours in residence at the University;
2. a minimum of thirty-three (33) graduate semester hours of course work, including at least six (6) credit hours of mathematics, three (3) credit hours of laboratory based courses, three (3) credit hours of special problems in engineering applications (design project), and six (6) credit hours of electives with the consent of the advisor.

Substitution within the core courses may be permitted with the consent of the advisor and the department head.

Admission Requirements

For unconditional admission to the Master of Engineering degree program, the student must have a bachelor's degree in engineering or science from an accredited program and must have the necessary prerequisite courses. If the evaluation of a student's undergraduate degree program reveals prerequisite deficiencies, the student must eliminate them by satisfactorily completing each of the prerequisite courses prescribed before unconditional status is achieved. None of the courses used to eliminate undergraduate deficiencies may be used in the student's program of study for the Master of Engineering degree.

For admission with unconditional classification, in addition to the above, the student must possess a grade point average (GPA) of 3.00 on a 4.00 scale.

For admission with conditional classification, in addition to the above, the student must have a GPA between 2.75 and 2.99 or a GPA between 2.50 and 2.74 and a passing score of 70 on the Fundamental of Engineering (FE) examination.

All students applying for admission must submit to the Graduate School a completed Graduate Application form and two copies of transcripts from all colleges and universities previously attended.

PROGRAM OF STUDY

Courses Required, All Options—12 hours

ENGR 5100	Methods of Applied Mathematics for Engineers I	3
*CISE 5220/BMEN 5000/CVEN 5360/MEEN 5610/CVEN 5780		3
ENGR 5500	Special Problems	3

Either of the following three-hour courses

ENGR 5150	Numerical Methods for Engineers	3
ENGR 5020	Optimization Methods for Engineers	3

*According to Concentration

CONCENTRATION I: BIOMEDICAL ENGINEERING

Mohammed Bodruzzaman, Ph.D.
Professor, ECE

Areas of Specialization

Biomedical Core Courses—15 hours

BIOL 5200/5240	General Physiology/Systemic Physiology	3
BIOL 5150	Special Problems II: Neurobiology	3
BMEN 5010	Introduction to Biomedical Engineering	3
BMEN 5030	Medical Imaging and Signal Processing	3
BMEN 5040	Biomechanics	3

Electives with the consent of the advisor—6 hours

CONCENTRATION II: CIVIL ENGINEERING

Farouk Mishu, Ph.D., P.E., Head

Areas of Specialization

A. Transportation Engineering

Transportation Core Courses—15 hours listed below

CVEN 5050	Transportation Modeling	3
CVEN 5090	Traffic Engineering	3
CVEN 5100	Pavement Design	3
CVEN 5130	Airport Planning and Design	3
CVEN 5200	Advanced Geometric Design of Highways	3

Electives with the consent of the advisor—6 hours

AREN 5100	Computer Codes	3
CVEN 5140	Urban Mass Transit	3
CVEN 5420	Advanced Foundation Engineering	3
CVEN 5430	Applied Soil Mechanics	3
CVEN 5640	Transportation Systems Evaluation Procedures	3
CVEN 5740	Elasticity	3
CVEN 5770	Theory of Plates and Shells	3
CVEN 5780	Finite Element Analysis	3

B. Structural Engineering

Core Courses—15 hours from courses listed below

CVEN 5420	Advanced Foundation Engineering	3
CVEN 5710	Advanced Reinforced Concrete Design	3
CVEN 5750	Stability and Vibration of Structures	3
CVEN 5760	Advanced Indeterminate Structures	3
CVEN 5780	Finite Element Analysis	3
CVEN 5790	Reinforced Masonry Design	3
CVEN 5800	Advanced Steel Design	3

Electives with the consent of the advisor—6 hours

CVEN 5740	Elasticity	3
CVEN 5770	Theory of Plates and Shells	3
CVEN 5790	Reinforced Masonry Design	3
CVEN 5820	Principles of Structural Design	3

CONCENTRATION III: ENVIRONMENTAL ENGINEERING**Farouk Mishu, Ph.D., P.E., Head****Core Courses—15 hours listed below:**

CVEN 5280	Solid Waste Management	3
CVEN 5300	Environmental Engineering Processes I	3
CVEN 5330	Water Quality Management	3
CVEN 5370	Environmental Chemistry	3
CVEN 5380	Environmental Impact Analysis	3

Electives with the consent of the advisor—6 hours

CVEN 5270	Ground Water Contamination	3
CVEN 5320	Environmental Engineering Design	3
CVEN 5350	Hazardous Waste Management	3
CVEN 5380	Environmental Impact Analysis	3
CVEN 5460	Nuclear Chemistry	3

CONCENTRATION IV: ELECTRICAL ENGINEERING**Satinderpaul S. Devgan, Ph.D., P.E., Head****Areas of Specialization****A. COMMUNICATION SYSTEMS****Core Courses—15 hours from courses listed below:**

EECE 5010	Information Theory	3
CISE 5110	Intro. to Artificial Intelligence	3
EECE 5220	Modern Signal Processing	3
EECE 5230	Digital Image Processing	3
CISE 5200	Probability, Random Processes and Estimation Theory	3

Electives with the consent of the advisor—6 hours**B. CONTROL SYSTEMS****Core Courses—15 hours from courses listed below:**

CISE 5110	Intro. to Artificial Intelligence	3
ENGR 5070	Object Oriented Programming for Engr.	3
ENGR 5200	Modeling and Simulation of Dynamic Sys.	3
CISE 5300	Fundamentals of Robotics	3
EECE 5640	Advanced Topics in Controls	3

Electives with the consent of the advisor—6 hours**C. ELECTRICAL POWER SYSTEMS****Core Courses—15 hours from courses listed below:**

CISE 5110	Intro. to Artificial Intelligence	3
EECE 5300	Computer Applications to Power System	3

EECE 5310	Power System Relaying	3
EECE 5320	Surge Phenomenon in Power Engineering	3
EECE 5330	Special Topics in Power Engineering	3
CISE 5200	Probability, Random Processes and Estimation Theory	3

Electives with the consent of the advisor—6 hours**CONCENTRATION V: MECHANICAL ENGINEERING****Hamid Hamidzadeh, Ph.D., Head****Areas of Specialization****A. THERMAL SCIENCES****Core Courses—15 hours from courses listed below:**

MEEN 5020	Optimization Methods for Engineering Design	3
MEEN 5030	Artificial Neural Networks	3
MEEN 5050	Energy Conversion Systems	3
MEEN 5310	Dynamics and Thermodynamics of Compressible Fluid Flow	3
MEEN 5400	Conduction and Radiation Heat Transfer	3
MEEN 5410	Convection Heat Transfer	3
MEEN 5420	Advanced Thermodynamics	3
MEEN 5780	Finite Element Analysis	3
MEEN 5820	Principles of Design	3
MGMT 6060	Production and Operations Management	3

Electives with the consent of the advisor—6 hours**B. MACHINE DESIGN****Core Courses—15 hours from courses listed below:**

MEEN 5020	Optimization Methods for Engineering Design	3
MEEN 5030	Artificial Neural Networks	3
MEEN 5040	Vibration Analysis	3
MEEN 5100	Theory of Viscoelasticity and Applications	3
MEEN 5110	Theory of Plasticity and Applications	3
MEEN 5120	Manufacturing Tribology	3
MEEN 5200	Advanced Dynamics	3
MEEN 5320	Lubrication	3
MEEN 5780	Finite Element Analysis	3
MEEN 5820	Principles of Design	3

Electives with the consent of the advisor—6 hours**CONCENTRATION VI: MANUFACTURING ENGINEERING****Hamid Hamidzadeh, Ph.D., Head****Core Courses—15 hours from courses listed below:**

MEEN 5010	Introduction to Manufacturing	3
MEEN 5130	Flexible Manufacturing Systems	3
MEEN 5610	Computer-Aided Design and Manufacturing	3
MEEN 5620	Design for Manufacturability	3
MEEN 5630	Manufacturing Management and Control	3
MEEN 5640	Manufacturing Modeling and Simulation	3
MEEN 5650	Predictive and Preventive Maintenance	3

MEEN 5660	Concurrent Manufacturing	3
MGMT 6060	Production and Operations Management	3

Electives with the consent of the advisor—6 hours**DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING**

Satinderpaul Singh Devgan, Ph.D., P.E., Head
214F Andrew P. Torrence Hall
(615) 963-5362
Fax: (615) 963-2165

MAJOR: COMPUTER AND INFORMATION SYSTEMS ENGINEERING (CISE)
DEGREE: MASTER OF SCIENCE (M.S.)

The Master of Science degree program in Computer and Information Systems Engineering is designed to meet the needs of information industry by preparing its graduates with background in computer hardware, computer software and systems approach to the design and development of computer integrated systems.

The Master of Science degree requires: admission of all degree seeking students to candidacy for the degree after completion of all prerequisites identified at the time of initial admission and the completion of nine (9) required graduate credit hours in residence at the university; a minimum of thirty (30) graduate semester hours of course work, including at least eighteen (18) credit hours of required core courses, six (6) credit hours of thesis, and six (6) credit hours of electives to be chosen from a list of courses and with the consent of the advisor and the approval of the department head.

Substitution within the core courses may be permitted with the consent of the advisor and approval of the department head.

Admission Requirements

The program provides opportunities for students from electrical or other engineering fields, computer science, and business majors to pursue this degree through different levels of admission status.

For admission to the M.S. in CISE program, the student must have B. S. degree in Electrical Engineering, or other engineering disciplines or computer science from an accredited program.

For unconditional admission, the student must also have the necessary prerequisite courses and a cumulative grade point average (GPA) of 3.00 or above out of 4.00.

Conditional Admission: Since this is an interdisciplinary program, student's previous preparation in the basic and engineering sciences, electrical engineering and computer science must reflect successful completion of basic sciences and differential equations, numerical analysis, linear algebra, probability and statistics, engineering design and engineering economics, circuit theory, analog and digital electronics, communication theory, advanced programming, data structures and operating systems, computer networks or their equivalents.

If an evaluation of the student's transcripts shows prerequisite deficiencies, or a cumulative GPA between 2.75 to 3.0, the student will be eligible for conditional admission. Students with a B. S. degree in Business or other related science areas with a cumulative GPA of 3.00 or above will be eligible for conditional admission. Also, students with a B.S. degree in engineering with a cumulative GPA between 2.50 to 2.74 and a passing score of 70 in Fundamentals of Engineering will be eligible for conditional admission. Students with exceptional experience in this field will be considered on an individual basis.

Admission to Candidacy

The university policy for admission to candidacy will be followed. However, students admitted conditionally must remove all deficiencies with a cumulative GPA of 3.25 in undergraduate prerequisite courses and accumulate no more than 9 graduate credits before achieving unconditional status.

PROGRAM OF STUDY**Courses Required—24 credit hours**

CISE 5010	Data Structures and Algorithms	3
CISE 5020	Computer Architecture & Operating System	3
CISE 5030	Software Systems Design	3
CISE 5040	Systems Engineering	3
CISE 5220	Computer Aided System Design	3
CISE 5230	Computer Communication and Networks	3
CISE 5905	Master of Science Thesis I	3
CISE 5906	Master of Science Thesis II	3

Two Electives from the list below with the consent of advisor—6 credit hours

CISE 5060	Error Control Codes	3
CISE 5110	Intro. to Artificial Intelligence	3
CISE 5240	Management of Information Systems	3
CISE 5300	Fundamentals of Robotics	3
CISE 5400	Special Topics in CISE	3
CISE 6100	Optimization in Operations Research	3
CISE 6360	Distributed Computing Theory & Design	3

Electives will be selected with the consent of the advisor and approval by the department head.

COURSE DESCRIPTIONS**ENGINEERING**

ENGR 5070. OBJECT-ORIENTED PROGRAMMING FOR ENGINEERING. (3) A course focused on design and implementation of engineering software systems using object-oriented programming approach. Object-oriented programming concepts are emphasized with applications from engineering and science. Topics include classes, interfaces, inheritance, polymorphism, packages, design patterns, and hardware-software integration. Java programming language is used as the main implementation language. Prerequisite: Basic programming skills (ENGR 2221 or ENGR 2231 or equivalent).

ENGR 5100. METHODS OF APPLIED MATHEMATICS FOR ENGINEERING 1. (3) Operational calculus, including Fourier Series and Fourier Integrals; complex variables, including integration in complex plane, residue theorem, and conformal mapping. Prerequisite MATH 3030 3120 or equivalent.

ENGR 5150. NUMERICAL METHODS IN ENGINEERING. (3) Numerical solutions of linear and non-linear equations, interpolation formulas, numerical integration and differentiation, and initial-value and boundary-value problems for ordinary and partial differential equations, eigenvalues and

eigenvectors. Use of the computer in the numerical methods. Prerequisite ENGR 3400 or equivalent.

ENGR 5200. MODELING AND SIMULATION OF DYNAMIC SYSTEMS.

(3) The course presents the methodology applicable to the modeling and analysis of a variety of dynamic systems, regardless of their physical origin. It includes detailed modeling of mechanical, electrical, electro-mechanical, thermal, fluid, manufacturing, and computer systems. Models are developed in the form of state-variable equations, input-output differential equations, transfer functions, and block diagrams. The course covers analogies among diverse physical systems, subsystem coupling methods, discretization of distributed systems, generalized time and frequency responses, systematic modeling for a broad class of systems using Bond Graphs, system identifications, and analytical and computer simulations using MATLAB and Simulink. **PREREQUISITE:** ENGR 5100 Methods of Applied Mathematics for Engineering

ENGR 5300. PROBABILITY AND STATISTICS. (3) Discrete and continuous probability densities, treatment of data, sampling distributions, inferences concerning means, variances and proportions, non parametric test, curve fitting, regression analysis, and use of computer software in statistical problems, applications. Prerequisite: ENGR 3200 or equivalent.

ENGR 5400. SENSOR TECHNOLOGY AND PROCESSING. (3) Study of sensor technology, modeling, implementation, and processing in control of passive and active systems. Concepts of sensor signature fusion, modeling, recognition and classification. Demonstration of intelligent sensor-based autonomous systems. Discussion of methods for sensor performance measurements. Laboratory design projects required. Prerequisite: ENGR 5100.

ENGR 5500. SPECIAL PROBLEMS. (3) Industry-oriented design project coupled with oral presentation and a written report. Prerequisite: consent of advisor.

ENGR 5605, 5606, 5607. (3) Special subject presented to cover current problems of unique advances in the leading edge of techniques to technology transfer.

ENGR 6150. ADVANCED SOFTWARE ARCHITECTURES. (3) A project-based course focused on analysis, design, implementation, and integration of complex object-oriented software systems. State-of-the-art software reuse and component interoperability platforms such as COM, CORBA, Enterprise JavaBeans, and Web Services are discussed in detail. Distributed software system design methods as well as software design with UML are covered with practical applications. Prerequisite: ENGR 5070 or equivalent.

BIOMEDICAL ENGINEERING (BMEN)

BME 5000. BIOMEDICAL INSTRUMENTATION. (3) This course provides instructional materials on the biomedical instrumentation, physiological measurements and analysis of physiological signals. Basic theory of measurements, electrodes, sensors, transducer, data acquisition and electrical safety are covered. The emphasis is on the use of Biopac system for physiological measurements (such as EEG, ECG, EMG etc.), use of Matlab and/or LabVIEW tools in developing analysis and data interpretation tool. Lecture 3 Credits. Prerequisites Courses (or Equivalent): Math 3120, Engr 2000, 2001 and Engr 2231.

BMEN 5010. INTRODUCTION TO BIOMEDICAL ENGINEERING. (3) A multi-disciplinary course of biomedical engineering which include: a historical perspective, basics of anatomy and physiology, bio-electric phenomena, biomedical sensors, bio-instrumentation, bio-signal processing, physiological modeling, skeletal muscle mechanics, cardiovascular mechanics, bio-materials, tissue engineering, biotechnology, radiation imaging, rehabilitation engineering and technology assisted therapies. Laboratory experiments for biomedical project design are also part of this course. Lecture 3 Credits. Prerequisites: EECE 4600 or equivalent.

BMEN 5030. MEDICAL IMAGING AND SIGNAL PROCESSING. (3) This course covers the principal methods for representing, storing, processing, coding, transmitting and analyzing of biomedical images by means of digital computers. Sampling theorems, image transforms, image enhancement and restoration, frequency domain and spatial domain techniques, image coding and transmission, and image segmentation and description are discussed. Applications will be on MRI, CAT, Ultrasound etc. Prerequisite: EECE 4600 or equivalent.

BMEN 5040. BIOMECHANICS. (3) An interdisciplinary course on Biomechanics covering topics such as: Biomechanics of solids, fundamentals of fluid mechanics, physiological fluid mechanics, mass transfer, bioheat transfer, the modeling approach to the study of physiological systems, biomaterials, the interaction of biomaterials and biomechanics, locomotion and muscle biomechanics, principles of electrophoretic separation, and application of MATLAB and/or LabVIEW tools in developing analysis and data interpretation. Lecture 3 Cr. Prerequisites (or Equivalent): MATH 3120, ENGR 2110, 22x1 or permission from the instructor.

CIVIL ENGINEERING

AREN 5100. COMPUTER CODES. (3) Computer Codes as related to analysis and design of architectural, civil, electrical and mechanical engineering systems.

CVEN 5020. OPTIMIZATION METHODS FOR ENGINEERING DESIGN. (3) Computerized design methods for optimization techniques. Formulation of optimization. Problems using design variables and design constraints. Constrained and unconstrained minimization techniques using gradient and direct methods, special redesign directions for simplified analysis.

CVEN 5050. TRANSPORTATION MODELING. (3) Analytical evaluation of trip generation, gravity models, probabilistic models used in trip distribution trip assignment; shortest path algorithm, Modal split calibration and testing of existing models.

CVEN 5090. TRAFFIC ENGINEERING. (3) A study of traffic congestion, capacity, signs and signalization, accident analysis and pedestrian controls using MUTCAD guidelines.

CVEN 5100. PAVEMENT DESIGN. (3) Analysis and design of sub-base and roadway surface; the mechanics of layered pavements (flexible and rigid), stresses and design criteria involved.

CVEN 5130. AIRPORT PLANNING AND DESIGN. (3) An introduction to the airport design process, including airport planning, air site considerations, landslide considerations (terminal layout and design access systems, parking).

CVEN 5140. URBAN MASS TRANSIT PLANNING. (3) The mass transportation problem, demand analysis and statistical projections methodologies used in mass movement of people and goods using UMTA guidelines and procedures.

CVEN 5200. GEOMETRIC DESIGN OF HIGHWAYS. (3) Concepts of design and the mechanics of motion applicable to the construction, operation, and maintenance of highways systems and facilities using AASHTO guidelines. Field exercises in horizontal and vertical curve layout required.

CVEN 5270. GROUNDWATER CONTAMINATION. (3) Analysis of subsurface contaminant transport and remediation; activation, adsorption, dispersion, chemical reaction and biodegradation of contaminants in groundwater flow, application of mathematical models to predict contaminant transport; case studies.

CVEN 5280. SOLID WASTE MANAGEMENT. (3) Quantities and characteristics of solid wastes; collection methods and equipment; recycling of wastes; disposal methods including composting, incineration and sanitary landfills; economics and planning of solid waste management systems.

CVEN 5290. AIR POLLUTION CONTROL. (3) Sources of primary and secondary air pollution; production of air pollutants from combustion processes. Air pollution control devices; air quality modeling. Prerequisite: Graduate Standing.

CVEN 5300. ENVIRONMENTAL ENGINEERING PROCESSES I. (3) Theory and application of physical and chemical processes applied to water and wastewater treatment systems including coagulation, flocculation, sedimentation and filtration. Prerequisite: CVEN 4250.

CVEN 5310. ENVIRONMENTAL ENGINEERING PROCESSES II. (3) Theory and application of biological treatment process; bacterial growth, kinetics; aerobic and anaerobic biological treatment process including suspended growth and attached growth processes; design of selected biological treatment processes. Prerequisite: CVEN 4250.

CVEN 5320. ENVIRONMENTAL ENGINEERING DESIGN. (3) Theory and design of structures for collection, purification, distribution, and disposal of water and wastewater.

CVEN 5330. WATER QUALITY MANAGEMENT. (3) Analytical evaluation of chemical, physical, and biological processes in natural water systems such as streams, lakes and estuaries; estimation of waste assimilation capacity; water quality criteria and management.

CVEN 5340. INDUSTRIAL WASTE TREATMENT AND DISPOSAL. (3) Evaluation of industrial waste problems; characteristics of wastes produced from industries; applications of engineering principles to treatment, recovery, and disposal of industrial wastes.

CVEN 5350. HAZARDOUS WASTE MANAGEMENT. (3) Generation of hazardous wastes by industries; nature and quantities of hazardous wastes; Transportation, treatment and Disposal; Environmental Impacts; Risk Analysis of Spills; management of Radioactive Wastes.

CVEN 5360. ENVIRONMENTAL ENGINEERING LABORATORY. (3) Basics of wet chemical analysis of water samples; titrimetric and spectrometric analysis; evaluation of processes such as coagulations, thickening, adsorption, gas transfer, etc. Prerequisite: CVEN 4250, CVEN 5300 or CVEN 5310.

CVEN 5370. ENVIRONMENTAL CHEMISTRY. (3) The kinetics and equilibrium relationships controlling the chemical behavior of aquatic environments; distribution and behavior of chemical species in dilute aqueous systems.

CVEN 5380. ENVIRONMENTAL IMPACT ANALYSIS. (3) An introduction to techniques for monitoring and assessing the impacts of engineering systems on environmental quality; study of air, water, land and urban environments.

CVEN 5400. THEORETICAL SOIL MECHANICS. (3) Flow of water in soil, stresses in soil mass, 1-D and 3-D consolidated including standard and constant strain-rate tests, shear strengths of soils, Triaxial and Simple Shear Tests. Prerequisite: CVEN 3130 or equivalent.

CVEN 5410. GROUND WATER AND SEEPAGE. (3) Hydro mechanics of confined and unconfined flow of water through soil; potential theory, application to design of earth dams and retaining walls. Prerequisites: CVEN 3130 or equivalent.

CVEN 5420. ADVANCED FOUNDATION ENGINEERING. (3) Subsoil investigation, shallow foundations. Analysis and design of retaining walls, piles and pile foundations. Prerequisite: CVEN 4440 or equivalent.

CVEN 5430. APPLIED SOIL MECHANICS. (3) Slope stability analysis soil dynamics, earthquake-resistant design of retaining walls and dams. Advanced seepage analysis including Transformation methods and Geotextiles. Prerequisites: CVEN 3130 or equivalent.

CVEN 5450. APPLIED ROCK MECHANICS. (3) Dynamic response to rock media, core-drilling problems, rapid excavation in rock. Case history studies, evaluation of current theories used in design of tunnels. Prerequisite: CVEN 3130 or equivalent.

CVEN 5460. NUCLEAR CHEMISTRY. (3) This course will involve the characteristics of nuclides(Isotopes). Radioactive nuclides are those elements having different masses, the same atomic number but unstable nuclei. These are two different occurrences of radioactive nuclei. Prerequisite: Graduate standing.

CVEN 5500. ADVANCED GEOMETRIC DESIGN OF HIGHWAYS. (3) Parameters governing the geometric design of highways, mechanics of curvilinear motion curve super elevation, widening on highway curves, elements of intersection design and design of interchange, use of AASHTO design guidelines. A design project is required. Prerequisite: CVEN 3320 or equivalent.

CVEN 5600. PAVEMENT DESIGN. (3) Analysis and design of sub-base, base and pavement of a roadway, mechanics of layered pavement, discussion of flexible pavement and rigid pavement, and rigid pavements as structural units. Beams of elastic foundations. Prerequisites: CVEN 3130, 3320 or their equivalent.

CVEN 5620. ADVANCED TRAFFIC ENGINEERING. (3) Characteristics of traffic elements; the road user, the vehicle and the road; volume, speed and delay studies; accident cause and prevention; highway capacity: concepts and applications; analysis of signal systems; parking control and design; pedestrian protection; roadway illumination systems and other operational problems. Prerequisite: CVEN 4640 or equivalent, or consent of instructor.

CVEN 5640. TRANSPORTATION SYSTEMS EVALUATION PROCEDURES. (3) Examination of transportation problems, goals and objectives; evaluation and decision-making techniques in transportation planning; economic analysis of transportation systems; cost allocation and benefit transfer; uncertainty and risk analysis; differential impact of transportation improvements. Prerequisites: CVEN 3320, ENGR 5300.

CVEN 5650. TRANSPORTATION MODELING. (3) Analytical evaluation of trip generation, gravity models, probabilistic models used in trip distribution, trip assignment and model split models, use of computer package, shortest path algorithm, critical review of the art in model formulations. Calibration and testing of some existing models for this geographical area. Prerequisite: CVEN 3320 or equivalent.

CVEN 5660. HIGHWAY SAFETY ENGINEERING. (3) Study of accident statistics, reporting systems, and characteristics; accident reconstruction; principles and techniques used in identification and evaluation of hazardous locations; and corrective measures to enhance highway safety. Prerequisite: CVEN 4640 or equivalent, or consent of instructor.

CVEN 5680. URBAN MASS TRANSIT PLANNING. (3) The mass transportation problem, demand analysis and statistical projections methods, mass transit planning model, introduction to UMTA planning package program network simulation. Prerequisite: CVEN 3320 or equivalent.

CVEN 5700. PLASTIC DESIGN IN STEEL. (3) Plastic analysis and design of steel beams, frames and connections, using the methods of mechanisms, energy and the moment rotation characteristics. Designed by the specifications. Analysis and design in steel using the Load and Resistance Factor Design method. Prerequisite: CVEN 3440 or equivalent.

CVEN 5710. ADVANCED REINFORCED CONCRETE DESIGN. (3) Design of footings, retaining walls, and two-way slabs. Design of beams for torsion. Analysis and design of continuous structures. Analysis and design of prestressed concrete beams. Prerequisite: CVEN 3420 or equivalent.

CVEN 5720. COMPOSITE STRUCTURE DESIGN. (3) Design of wood beams, columns, shear walls, diaphragms, and connections based on the latest specification. Materials include sawn lumber, glued-laminated timber, and plywood. Prerequisite: CVEN 3120 or equivalent.

CVEN 5730. MATRIX ANALYSIS OF STRUCTURES. Development of stiffness matrix for linear structural elements. Matrix operations with particular emphasis on the solution of banded matrices. Development of computer programs for structural analysis using the stiffness method. Prerequisite: CVEN 3410 or equivalent.

CVEN 5740. ELASTICITY. (3) Equations of equilibrium, compatibility and boundary conditions, and their application to plane stress and plane strain problems. Stress functions, strain energy methods, stress distribution in axially symmetrical bodies, special problems, and structures involving torsion and bending or prismatic bars. Prerequisites: CVEN 3120 or equivalent.

CVEN 5750. STABILITY AND VIBRATIONS OF STRUCTURES. (3) Bending of prismatic bars under simultaneous action of axial and lateral loads, harmonic motion, free and forced vibrations of one-degree of freedom systems with and without damping. Systems with two or more degrees of freedom, vibration of rods and beams. Prerequisite: CVEN 3410 or equivalent.

CVEN 5760. ADVANCED INDETERMINATE STRUCTURES. (3) Analysis of indeterminate structures, including multi-story frames, bearing wall and shear wall buildings. Analysis of entire structure. Prerequisite: CVEN 3410 or equivalent.

CVEN 5770. THEORY OF PLATES AND SHELLS. (3) Elements of plate-bending. Analysis of circular and rectangular plates by classical, finite difference, and finite element methods. An introduction to membrane theory of shells. Prerequisite: CVEN 3120 or equivalent.

CVEN 5780. FINITE ELEMENT ANALYSIS. (3) Theoretical basis of finite element method. Elements for use in the solution of two and three dimensional stress problems, plate bending and shell problems. Development of computer programs utilizing plane stress conditions. Prerequisite: CVEN 3120 or equivalent.

CVEN 5790. REINFORCED MASONRY DESIGN. (3) Design of masonry elements with emphasis on reinforced masonry, including the design of beams, columns, walls, and footings. Structural analysis and design of masonry building. Prerequisite: CVEN 3440 or equivalent.

CVEN 5800. ADVANCED STEEL DESIGN. (3) Advanced topics in structural steel design, including composite design, build-up beams, plate girders, and moment resisting column base plates. Introduction to design of roof trusses, rigid frames, bridges, and multi story buildings. Structural analysis and design of steel structure. Prerequisite: CVEN 3440 or equivalent.

CVEN 5820. PRINCIPLES OF DESIGN. (3) Development of design theories; design for manufacturability; evaluation of design; redesign principles; case studies.

COMPUTER AND INFORMATION SYSTEMS ENGINEERING (CISE)

CISE 5005. INTRODUCTION TO COMPUTER HARDWARE SYSTEMS. (3) Introduction to circuits elements and techniques of circuits analysis. Operational amplifier and techniques of Op-Amp circuit design. Boolean algebra and logic gates, design of combinational and sequential logic circuits, registers and counters, digital integrated circuits. Machine language, RISC and CISC architectures, and design of arithmetic unit, processor, memory system and input/output systems. Prerequisite: Graduate standing.

CISE 5006. INTRODUCTION TO INFORMATION SYSTEMS. (3) Introduction to linear system theory: Fourier series, Fourier transform, Laplace transform, Z-transform, power spectrum, and linear system analysis. Probability theory and random variables. Theory of information and communication systems, modulation theory, multiplexing, introduction to digital communications, computer communication systems and network protocols. Prerequisite: Graduate standing.

CISE 5007. INTRODUCTION TO COMPUTATION AND COMPUTER SOFTWARE. (3) This course provides background of computation and computer software for CISE students who are deficient in these areas. It is designed to introduce the concepts of discrete mathematics, data structures and algorithms, and operation system organization. Students study the selected topics which include (1) basic discrete structures such as sets, logic, functions, relations, counting and probability, and graph theory; (2) fundamental data structures such as array, list, stack, queue and binary search tree; algorithm design techniques such as divide-and-conquer, dynamic programming, and greedy technique; algorithm complexity analysis; well-known algorithms for sorting, searching, pattern matching, networked computing and communication; (3) important concepts of operating systems such as processes, thread, scheduling, deadlock, memory management, virtual memory, page replacement algorithm. This course will not be used to meet degree requirements. Prerequisite: Basic programming skills (ENGR 2221 or ENGR 2231 or equivalent).

CISE 5010. DATA STRUCTURES AND ALGORITHMS. (3) Files and data structures used in computing such as lists, etc., techniques of storing and retrieving data such as hashing, indexing, etc., relational data-base models, SQL databases and servers, and data-base management systems. Selection and design of algorithms, search and sorting techniques, pattern matching, mathematical problems. Prerequisite: COMP 3200, ENGR 2231 or equivalent.

CISE 5020. COMPUTER ARCHITECTURE AND OPERATING SYSTEMS. (3) An understanding of capabilities, limitations and applications of different computer architectures of large supercomputers to smaller workstations. Basic computer resource management techniques, discussion of types of operating systems, distributed and parallel processing, real time programming and inquire-response systems. An overview of different implementations. Prerequisite: COMP 4110 or COMP 3410 or EECE 4300 or equivalent.

CISE 5030. SOFTWARE SYSTEMS DESIGN. (3) Concept of software product life cycle, software design methodologies, stages in software development, metrics and models, reliability and reusability of code, software development tools, analysis, and design validation, small team projects involving architectural design and software specifications, computer aided software engineering (CASE). Prerequisite: EECE 3061 or COMP 3050 or EECE 4310.

CISE 5040. SYSTEMS ENGINEERING. (3) Introduction to systems, the system design process, systems analysis tools, including decision making, economic evaluation, optimization, queuing theory, statistical methods and process control concepts. Design of operation feasibility, human factors, logistics and systems engineering management. Introduction to data-base design and decision support systems. Prerequisite: Engr 2231, 3200, 3400 or equivalent.

CISE 5050. ADVANCED DISCRETE MATHEMATICS. (3) Selected topics in discrete mathematics, formal systems, mathematical deduction, logical concepts, theorem proving sets, relations on sets, operations on sets, functions, graphs, mathematical structures, morphism, algebraic structures, semigroups, finite state machines and simulation, Kleene theorem. Prerequisites: COMP 3200.

CISE 5060. ERROR CONTROL CODES. (3) Introduction to codes for error detection and correction, linear algebra over finite fields, bounds, perfect and quasi-perfect codes, probability of error checking, Hamming, BCH, MDS, Reed-Solomon codes, and non-linear codes. Prerequisite: COMP 3200, EECE 3500 or equivalent.

CISE 5110. INTRODUCTION TO ARTIFICIAL INTELLIGENCE. (3) Studies of different artificial intelligent concepts and techniques including: neural network topologies and training algorithms, fuzzy logic and decision making systems, genetic algorithms and search algorithms, probabilistic reasoning and belief functions. Applications in engineering will be discussed. Prerequisite: ENGR 5200 or equivalent.

CISE 5200. PROBABILITY, RANDOM PROCESSES AND ESTIMATION THEORY. (3) Introduction to basic concepts of probability theory, statistical techniques, and development of probability models, Random variables, multiple random variables, the central limit theory and long term averages; random processes, estimation and decision theory, Markov chains and introduction to Queuing Theory. Prerequisite: Graduate standing.

CISE 5220. COMPUTER AIDED SYSTEMS DESIGN. (3) Advanced computer-aided analysis and design tools for analysis of system properties and performance, study of structure and theory of computer aided design software and hardware and the small scale design of such tools. Prerequisites: EECE 3100, 3101, CISE 5010 or equivalent.

CISE 5230. COMPUTER COMMUNICATION AND NETWORK. (3) Covers theory of various information and computer communication networks and operation of open systems that enable exchange of information (data) in an open way to facilitate a range of distributed applications. Topics include—fundamental issues related to reliable transfer of data across serial data link following ISO reference model; data transmission over various types of communication medium; various types of computer networks that provide a switched communication facility over which computers can communicate; and the ISO layered network protocol, network topology, packet switching, routing, networks management, discussion of narrowband and broadband ISDN. Application of basic traffic theory, switching fundamentals and routing strategies. Prerequisite: EECE 3210, EECE 3500, EECE 4350 or equivalent.

CISE 5240. MANAGEMENT OF INFORMATION SYSTEMS. (3) This course will discuss current methods in use for the design and implementation of modern information technology in organizational systems. It will also provide a comprehensive introduction to basic principles of the legal, economic, and regulatory environment of the information industry. Prerequisite: MEEN 5020, EECE 3500 or equivalent.

CISE 5260. WIRELESS COMMUNICATIONS, PRINCIPLES AND PRACTICE. (3) This course will introduce fundamental theory and design of high capacity wireless communications systems. Topics include modern wireless standards and applications, cellular concept and implementation, mobile radio propagation, fading and multipath, modulation techniques, equalization, diversity, channel coding, multiple access technique, wireless networking. Prerequisite: EECE 3210, EECE 3500 or equivalent.

CISE-5300. FUNDAMENTALS OF ROBOTICS. (3) Two-dimensional and three-dimensional transformation techniques, manipulator kinematics and dynamics, robot differential motion and control, path planning and trajectory generation, task execution and robot programming will be discussed in details. Robot integration and simulation tools also will be presented. Prerequisite: ENGR 5100 or equivalent.

CISE 5400. SPECIAL TOPICS IN CISE. (3) Recent advanced topics in Computer and Information Systems Engineering will be studied based on faculty and students' needs Prerequisite: instructor's approval.

CISE 5905. MASTER OF SCIENCE THESIS I. (3) Thesis topics to be selected in consultation with the chairman of thesis committee and approval of the department head. The thesis will involve hardware, software and systems approach to the design and development of an integrated system. Student must have completed need analysis, identified operational and functional requirements, TPMs, and bench marks for design evaluation and selected an appropriate solution to pursue. Student must also develop a management plan with milestones, define maintenance concepts for life

cycle evaluation of optimum system. Student must complete these activities to receive a grade and as a prerequisite for next course. Prerequisite: Admission to Candidacy.

CISE 5906. MASTER OF SCIENCE THESIS II. (3) Continuation and completion of thesis and oral presentation defense. Prerequisite: CISE 590a.

CISE 6000. DATABASE MANAGEMENT SYSTEMS. (3) Database concepts. Database design Data models: entity-relationship and relational. Data manipulation languages including SQL. Data dictionaries. Query processing. Concurrency, software development environments use a database system. Expert, object-oriented, multimedia and distributed database systems. Database systems architecture. Use of a commercial database management system.

CISE 6100. OPTIMIZATION IN OPERATIONS RESEARCH. (3) Problem solving with mathematical models, deterministic optimization models in operations research, improving search, linear programming models, simplex search and interior point methods, duality and sensitivity in linear programming, multi objective optimization, shortest paths and discrete dynamic programming, network flows, discrete optimization methods and constrained and unconstrained nonlinear programming.

CISE 6200. INTRODUCTION TO COMPUTATIONAL INTELLIGENCE. (3) This course introduces the parallel computation techniques based on various artificial neural networks architectures. Learning rules for feedforward networks, Associative learning, competitive networks, Grossberg network, Hopfield network and their applications. Introduction to fuzzy logic theory, membership functions, fuzzy relations, fuzzy measures, approximate reasoning and design and applications of fuzzy and neuro-fuzzy systems. Introduction to genetic algorithms and their applications. Prereq: Graduate standing.

CISE 6300. STATISTICAL INFORMATION THEORY. (3) Foundations of modern digital communication systems. Random variables and random processors, autocorrelation functions; Digital signaling waveforms and their spectra. Probability of error in digital receivers. Information measure and source coding; channels and codes for error detection and correction. Introduction to traffic theory for telecommunications and optical communication. Prerequisite: EECE 3200 or equivalent.

CISE 6340. COMPUTER COMMUNICATION AND NETWORKS II. (3) Principles and issues underlying provision of wide area connectivity through interconnection of autonomous networks. Internet architecture and protocols today and likely evolution in future. Case studies of particular protocol practical Topics related to high-speed networks such as: frame relay, high-speed LANs and MANs, the asynchronous transfer mode (ATM) architecture, adaptation layers, switch architectures, preventive and reactive congestion control schemes, schemes for connectionless services over ATM, transmission schemes and signaling.

CISE 6360. DISTRIBUTED COMPUTING THEORY AND DESIGN. (3) Fundamental and systems design aspects of distributed systems, paradigms for distributed computing, client-server computing, concurrency control, distributed file systems, resource management, high-performance computing aspects.

CISE 6400. FUNDAMENTALS OF ROBOTICS IN MANUFACTURING. (3) Introduction to robotic automation, robot classifications, robot specifications, direct and inverse kinematics, workspace analysis; Trajectory planning, manipulator dynamics; Robot control, robot interface to manufacturing processes, machine interface, end-of-arm tooling, robot programming, and sensor integration and utilization in manufacturing. Laboratory projects are required. Prerequisites: Sound knowledge of static and dynamics, matrix operations, computer language programming or consent of the instructor.

CISE 6440. NUMERICAL VISUALIZATION. (3) Essential algorithms for three-dimensional rendering and modeling techniques; viewing transformations, illumination, surface modeling; methodologies for visualization of scalar and vector fields in three dimensions; applications of visualization.

CISE 7100. SYSTEM MODELING AND SIMULATION. (3) Modeling and analysis of systems under uncertainty. Integrated approach of stochastic analysis and simulation. Elementary queuing systems and networks. Discrete event simulation, choice of distributions, output analysis, animations.

CISE 7240. COMPUTER VISION. (3) This course covers the digital image processing and computer vision fundamentals, image analysis, image transforms, image restoration, image enhancement, image compression, image segmentation, image representation and description, image recog-

niton and interpretation. Use of Matlab toolbox, Khoros, CVIPtools and LabVIEW based image acquisition and visualization will be required for image data collection, processing and visualization. Prereq: Graduate standing.

CISE 7300. NETWORK PROGRAMMING. (3) Review of TCP/IP and UDP, transport layer, elementary and advanced sockets, TCP sockets and client server examples I/O multiplexing, socket options, elementary and advanced UDP sockets, name and address conversions, daemon processes and intend supersaver, advanced I/O functions, Unix Domain protocols, non-blocking I/O, routing sockets, broadcasting, multicasting, threads, and streamers. Prerequisite: Unix Operating System, networking protocols or equivalent.

CISE 7310. METRICS AND MODELS IN SOFTWARE QUALITY ENGINEERING. (3) Software development and quality, process models, measurement theory, software quality metrics, Ishikawa's seven basic quality tools in software development, defect removal, effectiveness, the Rayleigh model, reliability growth models, quality management models, complexity metrics and models, measuring and analyzing customer needs, AS/400 software quality management. Prerequisite: CISE 5030, CISE 5040, or equivalent.

CISE 7340. HIGH PERFORMANCE COMPUTER APPLICATIONS. (3) Design and analysis of parallel algorithms in fixed-connection network and PRAM models. Numerical computations, sorting, and routing. Comparisons of various parallel machine models. Relating machine models to architectural characteristics.

CISE 7350. NETWORK SECURITY AND RISK ANALYSIS. (3) Network security fundamental, security in layered protocol architecture, cryptographic techniques, authentication, access control, confidentiality and integrity, standard security techniques, electronic mail and EDI security, Network security, security evaluation measures.

CISE 7370. OPTICAL COMMUNICATION. (3) Optical communication systems, optical wave propagation, photodetection statistics, heterodyne receiver, and noise sources. Evaluation of communication performance for the free-space channel. Introduction to fiber optic communication and fiber optic networks communication.

CISE-7420. ADVANCED ROBOTICS. (3) Mobile robotics platforms, both unmanned ground vehicles and aerial vehicles, will be studied. Robot system integrations, applications of intelligent technologies in robotics, robot behaviors, robot sensing and control, vision systems and sensor fusion techniques will be explained in detail. Prerequisite: CISE 5300 and ENGR 5070 or their equivalent.

CISE 7430. MECHATRONICS SYSTEMS. (3) Introduction to electro-mechanical systems. General design and fabrication, and integration of electro-mechanical systems including: transducers, active and passive sensors, measurement devices, actuation systems, open, closed, and adaptive controllers, microprocessors and system components electronic interfacing and communication. Laboratory projects required. Prerequisites: basic familiarity with the subject of measurement, instrumentation, control, vibration, and signal processing of electro-mechanical systems or consent of the instructor.

CISE 7450. A. I. ROBOTICS. (3) The theory of artificially intelligent robotics is studied. Topics needed to program artificially intelligent robots for real-world applications are covered. Intelligence organization architectures such as hierarchical and reactive paradigms are introduced. Topics related to mobile robot applications such as sensing, perception, programming techniques and navigation are also presented. Applications of AI robotics in different fields are discussed. Prerequisite: ENGR 2231 or EECE 3061 or equivalent.

CISE 7505, 7506, 7507. SPECIAL TOPICS. (3) Covers topics of specific area interest including special research topics. To be approved by advisor and program director.

CISE 7600. SEMINAR. (0) To be taken by all Ph.D. candidates for a duration on one year during the final year and the approval of the advisor.

CISE 7900. CISE PH.D. DISSERTATION. (3-9) Research in area of specialization to be carried out under the direction of Advisory Committee. Variable credit course.

ELECTRICAL ENGINEERING

EECE 5000. STATISTICAL COMMUNICATION THEORY. (3) Application of principles of probability theory and random processes to the analysis and design of digital communication systems: continuous and discrete random variables; spectral density functions of digital signals. Probability of per-bit error of detection of baseband and passband signals; word error rates. Operations view of communication systems; blocking and delay probabilities. Prerequisite: EECE 3500 or equivalent.

EECE 5010. INFORMATION THEORY. (3) The intuitive concepts of information measure and transmission are given a sound theoretical basis. The Shannon Theory of Information is studied, including the notion of entropy, source and channel coding, and capacity. Pre-requisite: EECE 3500 or equivalent.

EECE 5020. OPTIMIZATION METHODS FOR ENGINEERING DESIGN. (3) Computerized design methods for optimization techniques and formulation of optimization. Problems using design variables and design constraints. Constrained and unconstrained minimization techniques using gradient and direct methods, special redesign directions for simplified analysis.

EECE 5030. ARTIFICIAL NEURAL NETWORKS. (3) Introduction to Neural Networks, its development history, concept of connectionism, neuron models, structure of neural networks, learning strategies, content addressable memory, design and applications of neural networks and other pertinent topics. Prerequisite: MATH 3120, ENGR 3400 or equivalent.

EECE 5100. COMPUTER STRUCTURES. (3) Microcomputer structure and programming, including memory operation, bus configurations, instruction formats, register operations, addressing modes and I/O operations. Medium and large scale computer structure. Design and programming of microcomputers. Pre-requisite: ENGR 2231 and EECE 3100.

EECE 5120. COMPUTER NETWORKS AND DISTRIBUTED PROCESSING. (3) Introduction to computer communication networks, including layered architecture and protocols, data link, network and transport layers, routing and multiple access algorithms, local area network standards, hardware and software aspects of interfacing digital system components.

EECE 5220. MODERN SIGNAL PROCESSING. (3) Parametric representation of discrete random signals, ARMA, Lattice, and State Space models; AR, MA, and ARMA spectral estimation; Levinson, Lattice and Kalman filters; Time-frequency transformations of random signal. Applications in radar, sonar and biomedical systems. Prerequisite: EECE 3200.

EECE 5230. DIGITAL IMAGE-PROCESSING. (3) This course covers the principal methods for representing, sorting, processing, coding, transmitting and analyzing of images by means of digital computers. Sampling theorems, image transforms, image enhancement and restoration, frequency domain and spatial domain techniques, image coding and transmission, and image segmentation and description are discussed. Prerequisite: EECE 3200. Computer programming course or consent of instructor.

EECE 5240. DIGITAL COMMUNICATION. (3) Digital communication concepts, channel characterization, base-band pulse transmission, coherent and non-coherent digital signaling, inter symbol interference, base-band shaping, equalization, synchronization and detection, error-control codes, modems, and terminals. Prerequisite: EECE 3300, 3500 or equivalent.

EECE 5300. COMPUTER APPLICATIONS TO POWER SYSTEMS. (3) Computer methods are used for the formation of system characteristics such as Z-bus, Y-bus and others. The system load flow and fault studies for system design and planning are formulated with computer methods emphasized. Prerequisite: EECE 3420.

EECE 5310. POWER SYSTEM RELAYING. (3) Fundamentals of relaying design and operation of protective schemes for generators, transformers, transmission and distribution circuits. Analysis of relay operation during abnormal system conditions. Prerequisite: EECE 3420.

EECE 5320. SURGE PHENOMENA IN POWER ENGINEERING. (3) Traveling wave principles for analysis of overvoltages. Methods of protection against overvoltage due to lightning, ground wire shielding, system and tower grounding, lightning arresters. Dynamic overvoltages switching phenomena and system recovery voltages. Coordination of insulation and protective devices. Prerequisite: EECE 3420.

EECE 5330. SPECIAL TOPICS IN POWER ENGINEERING. (3) The selected important areas of electric power systems as power system stability, economic dispatch and/or power system control, system reliability, etc., will be discussed.

EECE 5600. OPTIMAL CONTROL METHODS FOR ENGINEERING DESIGN. (3) Modeling of dynamics, actuators, sensors and criteria of goodness; state variable models, dynamic linearization methods, controllability, observability and stability. Closed loop design using observers and pole allocation methods, optimum control problems. Maximum principle and dynamic programming. The deterministic linear quadratic design problem. Applications to process control and air traffic control. Prerequisite: EECE 4000.

EECE 5610. STOCHASTIC ESTIMATION METHODS FOR ENGINEERING DESIGN. (3) The linear Kalman Bucy filter, non-linear filtering, the extended Kalman filter, and second order filters. Structure of stochastic feedback control system. Interplay between modeling issues and mathematical design. Practical aspects of compensator realization. Prerequisites: ENGR 5300.

EECE 5630. MODERN CONTROL SYSTEMS. (3) Analysis and design of multi-variable systems; matrix theory, state variable and state space analysis and design, Cayley-Hamilton Theory, continuous-time and discrete-time domain analysis and design, intrinsic properties of controllability and observability, stability analysis of linear and nonlinear dynamic systems with direct method of Lyapunov. Prerequisite: EECE 4000 or equivalent.

EECE 5640. ADVANCED TOPICS IN CONTROL SYSTEMS. (3) Methods for design and analysis of stationary and time-varying control systems are presented. Advanced control system design techniques such as observability and controllability using state-space representation are emphasized. Adaptive, optimal, and robust control system designs are also studied. Artificial Intelligence approaches to controller system designs are introduced. Prerequisite: ENGR 5200 "Modeling and Simulation of Dynamic Control Systems" or equivalent.

EECE 6220. ROBUST CONTROL THEORY. (3) Introduction to the theory and techniques of Robust Control. The three distinct and major problem areas to be covered are the parametric approach, the H^∞ theory and the L_1 theory. As linear system basics, topics include stability, performance, robustness, stable factorization and YJBK parameterization, and approximation of linear systems. In the parametric approach, topics include Kharitonov's theorem, parametric stability margins, polytopic systems, generalized Kharitonov's theorem, edge theorem, mapping theorem as well as mixed uncertainty problems. In H^∞ theory, topics include small gain theorem, Nevanlinna-Plok interpolations and factorization theory, various H^∞ control problems, and DGKF solution. H^∞/H_2 optimal control, and L_1 optimal control problem are also covered in this course.

EECE 6230. NONLINEAR CONTROL SYSTEMS. (3) Introduction to the concepts of nonlinear control systems. Topics include nonlinear system representation, nonlinear transformation, phase plane analysis, linearization and local stability, Lyapunov direct method, Lyapunov analysis for non-autonomous systems, positive linear systems, passivity in linear systems, absolute stability and Popov criterion, and feedback linearization.

EECE 6250. DIGITAL SPECTRAL ANALYSIS. (3) Review of classical parametric models of random processes and spectral estimation methods, autoregressive spectral estimation: block data algorithms and sequential data algorithms, autoregressive-moving average spectral estimation, Prony's method, minimum variance spectral estimation and eigen analysis based frequency estimation. Pre-requisite: EECE 5220 or equivalent.

EECE 6260. PATTERN RECOGNITION AND CLASSIFICATION. (3) Fundamental problems in pattern recognition system design, design of learning and adaptive machines, elementary decision theory, classification rules, pattern classification by distance functions and likelihood functions, deterministic and statistical approach to trainable pattern classifiers, pattern preprocessing and feature selection, elements of syntactic pattern recognition and adaptive classifiers, Prereq: Graduate standing.

EECE 7200. STATISTICAL SIGNAL PROCESSING. (3) Introduction to random process, detection and estimation theory, maximum variance unbiased estimation, Cramer-Rao lower bound, general minimum variance unbiased estimation, best linear unbiased estimation, maximum likelihood estimation, Least square methods of estimation, method of moments: second moments analysis, Bayesian philosophy and Bayesian estimators, and applications to communications and radar systems. Pre-requisite:

EECE 5220 and graduate level probability and statistics. Prereq: EECE 3200.

EECE 7210. ADAPTIVE CONTROL SYSTEMS. (3) Introduction and overview of the theoretical and practical aspects of adaptive control. Topics include real-time parameter estimation, deterministic self-tuning regulators, model reference adaptive control, auto tuning, gain scheduling, and robust systems. Some new results in adaptive neural networks are included.

EECE 7220. INTELLIGENT CONTROL SYSTEMS. (3) Study analysis and design of intelligent control systems using soft computing methodologies. Concept of intelligent systems, neural network architectures such as; recurrent neural networks, CMAC neural networks, radial basis function (RBF) networks, and reinforcement learning. The concept of fuzzy logic, fuzzy inference systems (FIS), and artificial neuro-fuzzy inference systems (ANFIS) will be introduced. Applications of intelligent control system to autonomous robots, flight control and other intelligent machines will be presented.

EECE 7230. ADAPTIVE FILTERING AND STOCHASTIC CONTROL SYSTEMS. (3) Wiener filter theory, linear prediction, adaptive transversal filters using gradient-vector estimation, Kalman filter theory and its applications to transversal filters, method of least squares, adaptive transversal filters using recursive least squares, design of adaptive estimator and control systems. Prereq: Graduate standing.

MECHANICAL ENGINEERING

MEEN 5010. INTRODUCTION TO MANUFACTURING. (3) Traditional and non-traditional manufacturing concepts, processes, and practices including: engineering metrology, quality assurance, inspection, human-factors in manufacturing, safety, product reliability, industrial robots, group technology, and cellular manufacturing. Laboratory Projects Required.

MEEN 5020. OPTIMIZATION METHODS FOR ENGINEERING DESIGN. (3) Computerized design methods for optimization techniques. Formulation of optimization. Problems using design variables and design constraints. Constrained and unconstrained minimization techniques using gradient and direct methods, special redesign directions for simplified analysis.

MEEN 5030. ARTIFICIAL NEURAL NETWORKS. (3) This course introduces one of the parallel processing techniques: Artificial Neural Networks (ANN). Introduction to neural networks, biological inspiration, definitions, comparison with conventional digital computers, vector mapping, classification of neural networks based on the input, paradigms, self-adaptions and learning algorithms, mapping networks and their architectures. Applications to Power Systems, Control Systems, Communications, Signal Processing, Quality Control, and Robotics. Prerequisite: Sound knowledge of any higher-level language. (C, Pascal or Fortran) or consent of the instructor.

MEEN 5040. VIBRATIONS ANALYSIS. (3) Undamped and damped vibrations for one and multi-degrees of freedom, solutions for transient and forced vibrations in lumped parameter systems, vibration control treatments, noise control and experimental techniques.

MEEN 5050. ENERGY CONSERVATION SYSTEMS. (3) Energy needs; solar energy collection; principle of nuclear power plants; direct energy conversion; thermodynamic analysis and design of direct energy conversion devices, e.g., fuel cells, thermoelectric, photovoltaic and magnetohydrodynamic (MHD) power generators and systems.

MEEN 5100. THEORY OF VISCOELASTICITY AND APPLICATIONS. (3) Viscoelastic phenomena, linear and non-linear theory. Operator equation of state. Relation and creep functions, photo viscoelastic examples. Applications to materials selection in design.

MEEN 5110. THEORY OF PLASTICITY AND APPLICATION. (3) Elastic vs. plastic deformation. General theories and approach to stress analysis. Tresca and von Mises' yield criteria. Prandtl-Reuss and other plastic stress-strain relations. Work-hardening, Plastic instability, Strain rate and deformation. Slip-line field theories. Load bounding and applications in engineering design. Prerequisite: CVEN 3120.

MEEN 5120. MANUFACTURING TRIBOLOGY. (3) Friction, wear and influencing parameters effects of load, speed and environment including lubricants. Systems approach to tribology. Characterization of material

damage and material development for tribosystems. Specific applications in matching and forming of materials.

MEEN 5130. FLEXIBLE MANUFACTURING SYSTEMS. (3) Introduction to Flexible Manufacturing Systems including: flexible and hard-automation, robotic systems, automated guided vehicles, programmable controllers, automated storage and retrieval systems, flexible end-of-arm tooling, sensors, machine visions, and flexible manufacturing integration. Laboratory Design Projects Required.

MEEN 5200. ADVANCED DYNAMICS. (3) Dynamics of a point mass and a distributed mass, dynamic forces on machine elements, continuous system vibrations, shock waves in solids. Lagrange equations and coordinate transforms. A machine elements laboratory problem will be analyzed and design changes discussed as a course project. Prerequisite: MATH 3030.

MEEN 5310. DYNAMICS AND THERMODYNAMICS OF COMPRESSIBLE FLUID FLOW. (3) One-dimensional isentropic flow, shock waves, flow in constant air ducts with friction, flow in ducts with heating or cooling and generalized one-dimensional continuous flow. Applications of theory to the design of compressible flow systems, e.g. wind tunnels, gas pipelines, etc. Prerequisite: CVEN 3100.

MEEN 5320. LUBRICATION. (3) viscosity and its variable viscous flow, hydrostatic and hydrodynamic lubrication. Applications of theory to the design of journal, thrust and other industrial bearings. Bearing Materials. Prerequisite: CVEN 3100.

MEEN 5400. CONDUCTION AND RADIATION HEAT TRANSFER. (3) Steady, periodic, and transient heat conduction in single and multidimensional systems. Both analytical and numerical methods are presented. Properties and laws of radiation, absorbing and emitting media and radiant exchange between surfaces separated by non-participating media. Problems involving combined radiation and conduction. Applications of theory to the design of engineering systems, e.g., cooling fins, heat shields, etc. Prerequisites: MEEN 4150, MATH 3030.

MEEN 5410. CONVECTION HEAT TRANSFER. (3) Steady, periodic, and transient heat conduction in single and multidimensional systems. Both analytical and numerical methods are presented. Properties and laws of radiation, absorbing and emitting media, and radiant exchange between surfaces separated by non-participating media. Problems involving combined radiation and conduction. applications of theory to the design of engineering systems, e.g. cooling fins, head shields, etc. Prerequisites: MEEN 4150, MATH 3030.

MEEN 5420. ADVANCED THERMODYNAMICS. (3) A study of thermodynamic properties and systems using kinetic theory and statistical mechanics. Application of theory to simple thermodynamic systems. Prerequisites: MATH 3030, ENGR 2010.

MEEN 5780. FINITE ELEMENT ANALYSIS. (3) Theoretical basis of the finite Element method. The physical and mathematical modeling using various elements. The applications of the method to various engineering problems. The generation of the finite element program.

MEEN 5820. PRINCIPLES OF DESIGN. (3) Development of design theories; design for manufacturability; evaluation of design; redesign principles; case studies.

MEEN 5610. COMPUTER-AIDED DESIGN AND MANUFACTURING. (3) Introduction to various topics related to computer-aided design(cad), computer-aided manufacturing(cam), computer-aided engineering(cae), computer-integrated manufacturing(cim), finite element modeling and analysis (fem), and manufacturing information processing (mip). Laboratory Projects required. Prerequisites: Sound knowledge of any CAD engineering design software or consent of the instructor.

MEEN 5620. DESIGN FOR MANUFACTURABILITY. (3) Design of products; Decision Making in Design, Form and Functions Interchange, Design for Manufacturability, Design axioms, Robust Design, and Optimum Design. Laboratory Design Projects Required.

MEEN 5630. MANUFACTURING MANAGEMENT AND CONTROL. (3) Introduction to theories and practices of manufacturing management. General management techniques discussed include: organizational planning, logistic control, Inventory management, manufacturing information processing and safety. Laboratory Projects Required.

MEEN 5640. MANUFACTURING MODELING AND SIMULATION. (3)

Introduction to queue theory and manufacturing system modeling including: machine time-history analysis and modeling, machine performance modeling, evaluation of simulation models, discrete-event programming, and autoregressive modeling and simulation. Laboratory Projects required. Prerequisites: Sound knowledge of any higher-level language. (C, Pascal or FORTRAN) or consent of the instructor.

MEEN 5650. PREDICTIVE AND PREVENTIVE MAINTENANCE. (3)

Introduction to predictive and preventive maintenance of electromechanical systems. Prediction of failure of machine components, practical techniques for detection and prevention of machine failure. Data acquisition and Signal processing. Laboratory Projects Required. Prerequisites: Familiarity with the subject of vibration control in mechanical systems or consent of the instructor.

MEEN 5660. CONCURRENT MANUFACTURING. (3)

Introduction to concurrent manufacturing and life-cycle engineering. Design conceptualization to product retirement including life-cycle engineering, design for recycleability, design for testability, design for serviceability, design for assembly, design for disassembly, and design for functionability. Laboratory Design Projects Required.

MEEN 6430. MANUFACTURING DIAGNOSIS AND PROGNOSIS TECHNIQUES. (3)

Techniques for effective machinery fault diagnosis and prognosis, signal condition, filtering, and processing, signature analysis, fault pattern recognition and classification, fatigue characterization, and life prediction using artificial intelligence techniques.

MEEN 6450. TRANSPORT PHENOMENA IN MANUFACTURING. (3)

Energy, momentum and mass transports encountered in typical manufacturing and material processing applications. Heat transfer by conduction, convection and radiation, flow of liquid and/or vapor, transport of chemical species, phase change, volumetric heating, magnetic and thermoelectric effects. Numerical simulation and visualization techniques.

GRADUATE FACULTY**ARCHITECTURAL ENGINEERING**

Hinton C. Jones, Associate Professor

B.S., 1967, Tennessee State University, M. Arch., Architecture, 1970, Howard University; D.Arch., Architecture, 1987, University of Michigan

Michael Samuchin, Professor

B.A., 1969, University of Illinois; M.S., 1971, Ph.D., 1972, Northwestern University

CIVIL ENGINEERING

F. C. Chen, Professor

B.S., 1961 National Cheng Dung University; M.S., 1966, Oklahoma State University; Ph.D., 1970, University of Wisconsin at Madison

Edward I. Isibor, Professor

B.S., 1965, Howard University; M.S., 1967, Massachusetts Institute of Technology; Ph.D., 1970, Purdue University

Farouk Mishu, Professor and Head

B.S., 1964, Al-Hakima University; Ph.D., 1974, Strathclyde University

Paily Paily, Professor

B.S., 1966, University of Kerala; M.S., 1969, Vikram University; Ph.D., 1974, University of Iowa

Roger Painter, Assistant Professor

B.S., 1986, University of Tennessee; M.S., 1989, University of Tennessee Space Institute; Ph.D., 1992, Tennessee Technological University

COMPUTER SCIENCE

Wei Chen, Professor

B.S., 1982, Shanghai Marine Institute; M.S., 1991, Osaka University; Ph.D., 1994, Osaka University

Amiri Gamshad, Professor and Acting Head

B.S., 1961, University of Tehran (Iran); M.S., 1970, Iowa State University; Ph.D., 1975, University of Sussex (United Kingdom)

Tamara Rogers, Assistant Professor

B.S., M.S., Ph.D., Vanderbilt University

Ali S. Sekmen, Assistant Professor

B.S., 1995, M.Sc., 1997, Bilkent University (Turkey); Ph.D., 2000, Vanderbilt University

Fenghui Yao, Associate Professor

B.A., 1984, Dalian Maritime University (China); M.E., 1988, Ph.D., 1992, Kyushu Institute of Technology (Japan)

ELECTRICAL ENGINEERING

Satinderpaul Singh Devgan, Professor and Head

B.Sc., 1961, Panjab University; M.S., 1965, Ph.D., 1970, Illinois Institute of Technology

Mohammad Bodruzzaman, Professor

B.S., 1977, M.S., 1979, Jahangirnagar University; M.S., 1984, Ph.D., 1990, Vanderbilt University

Liang Hong, Assistant Professor

B.S., 1994, M.S., 1997 Southeast University, Ph.D., 2002, University of Missouri-Columbia

Mohan J. Malkani, Professor and Associate Dean

B.S., 1953, M.S., 1955, Maharaja Sayajirao University; M.S., 1964, Mississippi State University; Ph.D., 1980, Vanderbilt University

Dhananjaya Rao Marpaka, Associate Professor

B.S., 1975, M.S., 1979, Osmania University; M.S., 1986; Ph.D., 1990, Florida Institute of Technology

Mohamed Saleh Zein-Sabatto, Professor

B.S., 1979, University of Aleppo; M.S., 1986, Ph.D., 1991, Vanderbilt University

MECHANICAL ENGINEERING

Hamid R. Hamidzadeh, Professor and Head

B.Sc., 1974, Arya Meher University of Tehran; M.Sc., D.I.C., 1975, Ph.D., 1978, University of London Imperial College of Science and Technology

Landon C. Onyebueke, Associate Professor

B.S. 1982, University of Ibadan, Nigeria, M.S. 1986, Ph.D. 1989, Institut National Polytechnique de Lorraine

Decatur B. Rogers, Professor and Dean

B.S., 1967, Tennessee A&I University; M.S., 1969, M.S., 1972, Ph.D., 1975 Vanderbilt University

Amir Shirkhodaie, Professor

B.S., 1983, M.S., 1985, Oklahoma State University; Ph.D., 1989, University of Cincinnati

COLLEGE OF HEALTH SCIENCES

COLLEGE OF HEALTH SCIENCES

Kathleen McEnerney, D.A., Dean
162 Clement Hall
(615) 963-5871

General Statement

The College of Health Sciences is committed to preparing tomorrow's healthcare leaders. The purpose of the College is to offer educational programs designed to produce practitioners and prepare individuals who are interested in pursuing careers as educators in the health professions; to encourage, develop and support interest in research; and to provide health care, when appropriate, and continuing educational services to the community.

Objectives

The objectives of the College of Health Sciences are:

1. To develop and implement educational programs designed to graduate health practitioners and educators based on employment demands and the availability of resources.
2. To recruit students interested in careers in the health care field in programs offered in the College and to provide these students with career counseling, academic advisement, and tutoring designed to assist them in achieving career goals.
3. To maintain full accreditation by appropriate agencies for all programs offered by the College.
4. To recruit and retain a faculty capable of making significant contributions to the basic and applied research efforts of the supporting institutions.
5. To encourage and promote the rendering of service to the community through the sponsorship of seminars, workshops, consultations, and the delivery of health care whenever appropriate.
6. To identify and develop the talents of students whose prior educational and cultural experiences have heretofore prevented them from participating in allied health careers.

In addition to the Doctor in Physical Therapy and master's degrees in Speech and Hearing Science and Occupational Therapy, the College offers undergraduate degrees in:

Cardiorespiratory Care Sciences
Dental Hygiene
Health Care Administration and Planning
Health Information Management
Health Sciences
Medical Technology
Speech Pathology and Audiology

DEPARTMENT OF OCCUPATIONAL THERAPY

Larry R. Snyder, PhD, Department Head
Office: 369 Clement Hall
(615) 963-5950

MAJOR: OCCUPATIONAL THERAPY (OCCT)
DEGREE: MASTER OF OCCUPATIONAL THERAPY (MOT)

Occupational Therapy is skilled treatment that helps individuals achieve independence in all facets of their lives. Occupational Therapy gives people the "skills for the job of living" necessary for independent and satisfying lives. Services typically include:

- Customized intervention programs to improve one's ability to perform daily activities
- Comprehensive home, community, school, and job site evaluations with adaptation recommendations
- Performance skills assessments and interventions
- Adaptive equipment recommendations, fabrication, and usage training
- Guidance to family members and caregivers

The Occupational Therapy program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE), of the American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, P.O. Box 312020, Bethesda, MD 20824-1220, (301) 652-AOTA.

Upon completion of all requirements students will be eligible to sit for the certification examination offered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this examination, the individual will be an Occupational Therapist, Registered (OTR) and will meet the educational requirements for licensure in Tennessee and most other states that regulate the practice of Occupational Therapy.

ADMISSION REQUIREMENTS

Program admission is made through the Graduate School of Tennessee State University. Application to the Occupational Therapy Graduate Program is competitive, therefore meeting minimum requirements does not guarantee admission to the program. In addition to the general requirements of the Graduate School, documentation of the following is required:

Evidence for potentially successful matriculation in this demanding academic program will be considered by the admissions committee, as follows:

- a. The average GRE composite score for accepted students will be 900 and should be taken within 5 years prior to application. The GRE composite and writing score is one variable that is considered in addition to other evidence of student achievement and aptitude, and will not be used as a cut-off score for admission to the program.
- b. Overall GPA of 2.5 or above on a 4.0 scale.
- c. Completion of the following courses within the last 7 years, with no course grade lower than a 2.0 on a 4.0 scale on any of the following:
 1. Biology, (Anatomy & Physiology preferred), including laboratory experience (2 courses)
 2. Physics or Equivalent (3 credits) Medical Terminology (1 to 3 credits)
 3. Psychology: general, developmental, and abnormal psychology (9 credits) Developmental psychology must cover the lifespan
 4. Statistics (3 credits)
 5. Computer Literacy (a course in computer literacy or a course in which computer literacy is demonstrated)

Note: Other factors indicative of the potential for excellence in professionalism and practice will be reviewed by the admissions committee, as follows:

- i. Three letters of reference from non-family members
- ii. Documentation and assessment of performance during 30 hours of volunteer work or paid experience supervised by an Occupational Therapist or an Occupational Therapy Assistant, which will include face-to-face contact with patients/clients receiving services.
- iii. Face-to-face or telephone interview with members of admission committee, to provide information about character, oral communication skills, self-management, identity with and commitment to the profession of occupational therapy, and other attributes consistent with success in this professional program.
- iv. Written essay describing interest and motivation to pursue the degree
- v. Evidence of leadership potential through participation in extracurricular activities. Applicants who do not meet the GPA or GRE standards, but who demonstrate strengths in other areas, may be considered for conditional admission.

Retention Requirements

Consistent with the TSU Graduate School, students must maintain a minimum average grade of B, (3.0 quality points on a 4.0 system). Any course attempts resulting in a grade of less than C may be repeated once, and the second grade will replace the first. All academic standard policies of the Graduate School will apply. With the exception of OCCT 5650, 5850, 6350, 6920, 6900, and 6910, all courses must be successfully passed prior to sitting for the written comprehensive examination. The written comprehensive examination must be passed with a score of 80 percent or better prior to the student's enrollment in the OCCT 6900 & OCCT 6910. The student may make up to 3 attempts to pass the Comprehensive exam. Failure to achieve 80 percent or better after the third attempt will result in dismissal from the OT program.

Graduation Requirements

All required courses must be completed successfully as defined in the retention requirements.

Financial Assistance

Upon acceptance into the graduate program, students may apply for available stipends or other financial aid.

PROGRAM OF STUDY

Core Courses: Professional Curriculum Seventy-three (74) Hours

Year I

OCCT 5010	Occ. Therapy Foundations	1
OCCT 5050	Occupation & Purposeful Activity	3
OCCT 5200	Professional Evidence in OT	3
OCCT 5750	OT Leadership I	1
OCCT 5250	Developmental Perspectives on Living and Learning	3
OCCT 5120	Neuromotor Dimensions of Performance	3
OCCT 5300	Facilitating Development Through Living and Learning	4
OCCT 5404	Pediatric Practicum	2
OCCT 5140	Anatomy & Biomechanics	5
OCCT 5650	Project Design	2
OCCT 5550	Occ. Perspectives of Adults	3
OCCT 5551	Occ. Therapy Process for Adulthood	4
OCCT 5700	Adult Practicum	2
OCCT 6450	Occ. Therapy Leadership II	2
OCCT 6920	Interdisciplinary Team Practice	1

Year II

OCCT 5251	Peds. Facilitation	4
OCCT 5450	School-based Services	3
OCCT 6550	Occ. Perspectives On Late Adulthood	2
OCCT 6601	Occ. Therapy Process for Late Adulthood	4
OCCT 5850	Project Implementation	3
OCCT 6350	Project Presentation	1
OCCT 6750	Occ. Therapy Leadership III	2
OT Electives		3
Comprehensive Examination		0
OCCT 6654	Occ. Therapy Practicum: Late Adulthood	2
OCCT 6900	Internship I	6

Year III

OCCT 6910	Internship II	6
OCCT 6300	Reflective Clinical Analysis	2

Electives

OCCT 6810	Modalities of Occupational Therapy	3
OCCT 6820	Sensory Processing and Integration	3
OCCT 6830	Assistive Technology	3
OCCT 6840	Independent Study	3
OCCT 6920	Interdisciplinary Team Practice	1

Contact the department about the details of a part-time track in occupational therapy.

COURSE DESCRIPTION

OCCT 5010 FOUNDATIONS OF OCCUPATIONAL THERAPY (1) This course introduces students to the profession of occupational therapy. Topics to be covered include: historical development of the profession, educational and credentialing process, functions of national, state, and local professional associations and human service organizations, professional role delineations within occupational therapy, teaming, promotion of the profession to the public, importance of theory development and documentation to the profession, and an introduction to the variety of service models. Prerequisites: admission to the occupational therapy graduate program.

OCCT 5120 NEUROMOTOR DIMENSIONS OF PERFORMANCE (3) This course will study the systems and function of the human nervous system including concepts related to the support of occupational performance. This will include the sensory system, motor control system, cognitive system, and affective system. This course will be taken concurrently include laboratory exercises experiences. Prerequisites include: completion of natural sciences requirements.

OCCT 5050 OCCUPATION AND PURPOSEFUL ACTIVITY (3) This hands-on course offers students an opportunity to use critical and creative thinking with ill-structured problems. Students will apply occupational therapy practice models in order to analyze and modify the demands of various occupations, activity, and purposeful activities and acquire basic skills in the therapeutic use of self. Prerequisites: admission to the occupational therapy graduate program.

OCCT 5140 ANATOMY AND BIOMECHANICS (5) This course is designed to provide students with a knowledge base in human body and human motion, the forces that effect motion, and the principles underlying the assessment of joint motion, muscle strength, muscle tone, motor control, and coordination. Students will learn and apply the principles of anatomy, biomechanics, and kinesiology. Prerequisites: 2 semesters of Biology, (Anatomy and Physiology Preferred), college physics or equivalent.

OCCT 5200 PROFESSIONAL EVIDENCE IN OCCUPATIONAL THERAPY (3) This course provides students with an overview of research theory including qualitative and quantitative methodology, evidence-based practice, and ethical considerations. Students will learn to understand and critique research studies and develop understanding of the publication process. Students analyze the relationships between theory, research, practice, and professional development. Prerequisites: admission to the occupational therapy graduate program.

OCCT 5250 DEVELOPMENTAL PERSPECTIVES ON LIVING AND LEARNING (3) This course will provide instruction in pediatric occupational therapy concepts including developmental theory models, typical and atypical development, culture, occupational roles and dynamics between the child and family and the community as related to the Person-Environment-Occupation Model. A variety of service delivery settings will be addressed. Prerequisites: OCCT 5050, Co-requisite: OCCT 5450.

OCCT 5300 DEVELOPMENTAL PERSPECTIVES ON LIVING AND LEARNING (3) This course provides the opportunity to develop professional reasoning and a variety of practical skills including application of the Person-Environment-Occupation Model to the therapeutic use of self, specific assessment and intervention techniques and application of assistive technology for the pediatric population. Students explore methods of data collection and documentation related to occupational behavior with the Person-Environment-Occupation Model. Students are also exposed to methods of inquiry that promote the development of evidence based, client and family centered intervention strategies for the pediatric and adolescent population. Prerequisites: OCCT 5050, 5200, 5250. Co-requisite: OCCT 5400.

OCCT 5404 PEDIATRIC PRACTICUM (2) This course presents students with an opportunity to explore pediatric service delivery settings. They are guided through analyzing the relationships between person, environment, and occupation through various models of occupation therapy. Students practice effective oral and nonverbal communication skills, and the process of naturalistic inquiry. Pre- or co-requisites: OCCT 5250 and 5300

OCCT 5450 SCHOOL-BASED SERVICES (3) This course is designed to prepare students to work in school setting with children and adolescents. Students learn about the design of educationally appropriate occupational therapy services, and roles of the COTA and other team members. IEP dynamics related to teaming and advocacy as well as funding issues related

to IDEA and Section 504 are covered. Pre-requisites: OCCT 5250, OCCT 5300, OCCT 5400.

OCCT 5550 OCCUPATIONAL PERSPECTIVES OF ADULTS (3) This course provides in depth instruction in occupational therapy theories, models, and frames of reference important in adult health care practice. Students learn about typical and atypical development, and the variety of social factors and choices that impact occupation. The development of occupational roles, including marriage and parenting, and the dynamics between the client, family and the community are examined. As students gain an appreciation for client-centered and occupation-based practice, they learn how to improve health, prevent injury, and promote recovery and adaptation to disease and disability. Prerequisites: OCCT 5050, 5250, OCCT 5300.

OCCT 5651 OCCUPATIONAL THERAPY PROCESS FOR ADULTHOOD (4) This course provides instruction and practice in skills required for service delivery for adults in a variety of contexts. Students learn professional reasoning, including collection, organization, and analysis of data, as well as practical skills appropriate to occupational therapy practice models. They are exposed to methods of inquiry that precede patient evaluation and the development of evidence-based, client-centered intervention strategies to achieve functional outcomes. Prerequisites: OCCT 5050. Pre- or co-requisite: OCCT 5550. Co-requisite: OCCT 5650.

OCCT 5650 PROJECT DESIGN (2) Students experience the process of framing a problem, reviewing the literature, linking the problem to theory, and formulating research questions on a concern of their interest. Students are guided through the selection of appropriate design approaches, in preparation for their major project. Peer-support and -evaluation foster understanding and implementation of the design process of conducting research or a major project. Pre-requisites: admission to OT graduate program and OCCT 5200.

OCCT 5700 ADULT PRACTICUM (2) In this course, students observe and interact with adults facing social, psychological, cognitive, and/or physical challenges in various practice settings. Students make reflective journal entries as a way to synthesize active learning experiences provided in this course. Students also develop the practice of safety precautions with the client during intervention. Prerequisite: OCCT 5400. Prerequisite or Corequisite: OCCT 5550, Co-requisite: OCCT 5600.

OCCT 5750 OCCUPATIONAL THERAPY LEADERSHIP I (1) This course provides students with an overview of management theories, principles, and techniques as well as internal and external factors that affect the occupational therapy and the management of occupational therapy. Other topics included; managed care, political and legislative issues, social and cultural issues, ethics, and the use of technology in management. Prerequisites: OCCT 5010.

OCCT 5850 PROJECT IMPLEMENTATION (3) This course follows OCCT 5650, Project Planning and Design. Students enrolled in this course complete a project under the direction of an approved occupational therapy graduate faculty member. The project include contacts with one or more service recipients and application occupational therapy theory, which incorporates a plethora of population specific theoretical models/frames of reference with a person, environment, and occupation relevance. Pre-requisite: OT 5650

OCCT 6300 REFLECTIVE CLINICAL ANALYSIS (2) Through this course, students will utilize reflective clinical reasoning skills in an effort to synthesize clinical evaluation, treatment planning, and intervention strategy information. Using a case based format, students will be required to analyze, interpret and, demonstrate an understanding of the material covered throughout the MOT program.

OCCT 6350 PROJECT PRESENTATION (1) Students enrolled in this course complete a project under the direction of an approved occupational therapy graduate faculty member. Students present their projects orally before the faculty and students, and submit an abstract presentation to a professional conference of their choice. Prerequisite: OCCT 5650, 5850, 6350.OCCT

OCCT 6450 OCCUPATIONAL THERAPY LEADERSHIP II (2) This course provides students opportunities to explore higher order management functions such as; marketing, financial planning and management strategic planning and organizing, negotiations and contracts, human resource functions, staffing, consumer issues, budgeting and reimbursement issues. Students are also required to present oral and written work using

management principles and terminology. Prerequisites: OCCT 5750. Co-requisite: 6250.

OCCT 6550 OCCUPATIONAL PERSPECTIVES: LATE ADULTHOOD (2)

This course provides instruction relative to the geriatric population. Instructional strategies include assessment and intervention strategies of person, environment, and occupation as well as other theoretical models/frames of reference designed to enhance occupation. The areas of course focus include typical and atypical development, culture, occupational roles and dynamics between the client and family and the community as related to a variety of service delivery settings. Prerequisites: OCCT 5050, OCCT 5200.

OCCT 6601 OCCUPATIONAL THERAPY PROCESS: LATE ADULTHOOD (4)

This course provides instruction and opportunity to practice skills required for service delivery for the geriatric population in a variety of contexts. Students have opportunities to develop and apply professional reasoning and practical skills from a variety of practice models, which incorporate the interactive elements of the person, environment, and occupation. They are exposed to methods of inquiry that develop evidence based, client centered intervention strategies. Co-requisite: OCCT 5650.

OCCT 6654 OCCUPATIONAL THERAPY PRACTICUM: LATE ADULTHOOD (2)

This course provides students with opportunities to participate in assessment and service delivery planning for the geriatric population. Students participate in active learning experiences in order to integrate course material from occupational therapy perspectives and process pertinent to the geriatric population. These experiences develop the students' ability to comprehend the interaction of the person, environment, and occupation. Co-requisites: OCCT 5650.

OCCT 6750 OCCUPATIONAL THERAPY LEADERSHIP III (2)

This is the final leadership course. Students synthesize the entire management process through community exploration, program analysis, and development. Students compare and contrast the community, medical, educational, and industrial models. Students produce a formal business plan within a model of choice. Prerequisite: OCCT 6450.

OCCT 6810 MODALITIES IN OCCUPATIONAL THERAPY (3)

This is an elective course that provides students with the theory and application of both thermal and electrical physical agent modalities. Topics included are theory, treatment procedures, and proper application of various physical agent modalities. Students are expected to complete a comprehensive literature review. This course meets the requirements established by Tennessee's Health Related Board for use of physical agent modalities in practice. Students completing this course are eligible for certification in both thermal and electrical modalities. Prerequisites: OCCT 5550 and OCCT 5600.

OCCT 6820 SENSORY PROCESSING AND INTEGRATION (3)

This course is an elective designed for students interested in working with children or adults with developmental disabilities. Students analyze the relationship between neurological differences, learning, and behavior as well as the interactive elements of the person, environment, and their impact on occupation. They learn specific skills to manage neurological differences and facilitate typical behavior and learning patterns in order to maximize occupational performance. Prerequisites: OCCT 5200, OCCT 5250, OCCT 5300.

OCCT 6830 ASSISTIVE TECHNOLOGY (3)

This elective course provides an overview of legal and ethical issues as well as funding procedures related to assistive technology. Students apply assistive technology to a variety of areas of occupation. They use client-centered strategies, develop, and manage assistive technology interventions and funding strategies. Prerequisites: OCCT 5150, OCCT 5250, OCCT 5550, OCCT 6250.

OCCT 6840 INDEPENDENT STUDY (3)

This course provides an opportunity for students to explore a topic of interest, under the approval and guidance of an occupational therapy faculty member. Prerequisites: approval of the department head and a plan of study approved by the supervising faculty member.

OCCT 6900 INTERNSHIP I (6)

This first internship course requires the minimum equivalent of 940 hours of participation in an assigned and approved practice setting under the supervision of an occupational therapy practitioner with one year of clinical or professional experience, according to accreditation standards. The setting must be approved by the Academic Fieldwork Coordinator in the Occupational Therapy Graduate Program. Students must successfully complete all required Occupational Therapy

courses prior to enrolling in this course. Prerequisites: successful completion of comprehensive written examination, permission of department head.

OCCT 6910 INTERNSHIP II (6)

This course is the second 940-hour Level II fieldwork experience in an assigned setting approved by the Academic Fieldwork Coordinator. Prerequisites: OCCT6900.

OCCT 6920 INTERDISCIPLINARY TEAM PRACTICE (1)

Teamwork skills are essential in all practice settings, but are particularly important when working with members of other disciplines. Students learn about the education and roles of various healthcare providers and practice role promotion and delineation with other team members in case-based learning format.

GRADUATE FACULTY

Katherine Y. Brown, Associate Professor
B.S., 1996, Chicago State University; M.S., 1999, Purdue University; Ed.D, 2005, National-Louis University

Debra Smart, Assistant Professor
B.S., 1990, Indiana University; M.S., 1996, Eastern Kentucky University; M.A. 2005, Trevecca Nazarene University

Larry R. Snyder, Associate Professor and Department Head
B.S., 1978, M.S., 1984, University of Wisconsin-Madison; Ph.D. 2005, Northcentral University

Sandy Stevens, Assistant Professor
B.S., 1986, Kansas University; M.S., 2005 Middle Tennessee State University

Terri Thompson, Assistant Professor
B.A., 1983, The College of St. Catherine; M.A., 1990, St. Mary's University Winona

DEPARTMENT OF PHYSICAL THERAPY

Rosalyn R. Pitt, EdD, Department Head
Office: 368 Clement Hall
(615) 963-5881

MAJOR: PHYSICAL THERAPY (PPTH)
DEGREE: DOCTOR OF PHYSICAL THERAPY (D.P.T.)

Physical therapists are health care professionals who apply knowledge and skills from the basic clinical and behavioral sciences to prevent or correct acute and chronic physical disorders. Physical therapists design and implement treatment programs to assist patients in achieving maximum levels of independence. This is achieved through prevention of or adaptation to disability, restoration of function, relief of pain, and promotion of healing.

Physical therapists work in a variety of settings with other members of the health care team. These settings include hospitals, outpatient clinics, nursing homes, home health agencies, rehabilitation centers, private clinics, and schools.

The physical therapy program at Tennessee State University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

ADMISSION REQUIREMENTS

Admission to the DPT program at TSU is a competitive process with admission to the program occurring once annually. A maximum of 36 students are enrolled in each class. A Bachelor's degree is required by the end of spring semester prior to the summer in which the applicant plans to start.

Application packets may be submitted between October 1 and February 15.

To be considered for admission to the program, applicants must have completed:

Pre-requisite requirements:

Biology I and II:	8 hours
Chemistry I and II:	8 hours
Physics I and II:	8 hours
Anatomy/Physiology:	8 hours
Math: must complete coursework that fulfills pre-requisite requirements to take Physics I and II	
Statistics:	Elementary statistics
Humanities:	9 hours
Psychology:	6 hours
Writing: 6 hours of freshman English that assures proficiency in the ability to write demonstrating appropriate grammar, pronunciation, and spelling.	

Students must also have

- an overall grade point average (GPA) of at least 3.0 for undergraduate studies
- competitive scores on all three sections of the Graduate Record Exam (GRE)
- an interview with the faculty
- a written essay
- three letters of recommendation

It is highly recommended that the student have experienced exposure in the physical therapy field through volunteer service, working as a physical therapy technician, etc. in a variety of physical therapy settings.

In order to better prepare the student for a health career, it is recommended that the student take the following courses prior to entering the program:

- Medical terminology
- Ethics
- Upper division science (i.e. biology, chemistry, physiology, kinesiology,
- Biomechanics
- Foreign language
- Health systems
- Business management/Health Economics
- Speech
- Anthropology, Cultural Anthropology, Physical Anthropology
- First Aid, CPR

Application Procedures

Download the application forms found on the TSU Physical Therapy website under DPT admissions:

1. Graduate School Application
2. PT Application/Transcript Self- Evaluation Form
3. Letters of Recommendation forms

Complete and mail ALL FORMS by February 15 with APPLICATION FEE to:

Office of Graduate Studies and Research, Tennessee State University, 3500 John A. Merritt Blvd., Nashville, TN 37209-1561

Early applications are encouraged to facilitate timely transcript evaluation.

Students who expect to complete a bachelor's degree in spring just before beginning the program may be accepted pending the receipt of official transcripts including the degree earned.

International Applicants: Applicants with international undergraduate degrees should consult the appropriate section of this catalog, or the Graduate School website for international admission procedures.

Financial Assistance

Upon acceptance into the physical therapy program, students may apply for available stipends or other financial aid.

DEGREE REQUIREMENTS

The Doctor of Physical Therapy degree requires a total of 115 hours in the professional course of study. All students accepted for admission into the graduate program in Physical Therapy must meet the following requirements prior to enrollment in the clinical practicum:

- Proficiency in medical terminology
- Documentation that they are free from communicable disease
- Tuberculosis screening and all required immunizations
- Current Cardiopulmonary Resuscitation (CPR) and Basic First Aid certification
- Health/Accident insurance coverage
- Professional student liability insurance coverage
- The following Essential functions that give the ability to perform, whether unaided or with reasonable accommodation, the following functions for a clinical practicum:
 - Critical thinking ability sufficient for clinical judgment;
 - Interpersonal abilities sufficient to interact with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds;
 - Gross and fine motor abilities sufficient to provide safe and effective physical therapy care;
 - Auditory abilities sufficient to monitor and assess health needs;
 - Visual acuity sufficient for observation and assessment necessary in physical therapy care;
 - Tactile ability sufficient for physical assessment and treatment;

- Physical ability to assist moving, transferring and ambulating patients who have physical impairment or dysfunction.

If a student is unable to perform the aforementioned essential technical functions, they have the right to request reasonable accommodations in accordance with TSU's disability policy as described in the Tennessee State University Student Handbook.

Retention

Students who withdraw or who are suspended from the program will be required to reapply for admission to a subsequent class if they wish to continue to pursue physical therapy studies.

Students who obtain a final grade of 74 or less in a course will be allowed to retake the final examination for that course, provided the student was passing at 75% or higher on sitting for the final; only one retake is allowed per course. A final grade no higher than a "C" can be obtained on the retake. Failure of a course results in automatic suspension from the program.

A student will be suspended from the professional phase of study for any of the following reasons:

- A grade of "C" in more than 6 hours per semester in the professional course of study;
- A grade of "F" in any professional course;
- Failure to maintain a 3.0 cumulative grade point for all professional coursework;
- Withdrawal from any professional course or failure to register for any semester without prior approval of the department chairperson;
- Failure to comply with any clinical or academic policies established by the department and published in the Department's student Handbook;
- Failure to comply with the University standards as published in the Student Handbook, the Course schedule book, and other similar University publications.

Students must maintain a minimum cumulative grade of "B" (3.0 quality points on a 4.0 point system) in the professional component courses. If a student has completed nine (9) or more semester hours of graduate work earning an average of less than 3.0, that student will be placed on scholastic probation. Probationary status must be removed by raising the cumulative grade average to a "B" or better during the next nine (9) hours of graduate work following the probationary period. Failure to raise the cumulative grade point average to "B" or better will result in suspension from the School of Graduate Studies and Research. Students who have been suspended may apply for readmission after one full semester.

Readmission is subject to the approval of the Dean of the School of Graduate Studies and Research in consultation with the Graduate Council Appeals Committee, and with the appropriate Graduate Coordinator and Dean. Readmitted students who fail to maintain a minimum cumulative average of "B" during any semester after readmission, will be dropped permanently from the School of Graduate Studies and Research.

Students are given and must pass a comprehensive exam during the final year of study.

PROGRAM OF STUDY

YEAR 1

Semester 1	Summer	
PHTH 5360	Gross Anatomy	6.0
PHTH 5380	Introduction to Physical Therapy	1.0
PHTH 5330	Psychosocial Behavioral Issues	2.0
		9 credits

Semester 2	Fall	
PHTH 5470	Applied Physiology	3.0
PHTH 5490	Pathology	3.0
PHTH 5460	Biomechanics & Movement Science I	3.0
PHTH 5440	Human Development across the life span	2.0
PHTH 5421	Tests & Measurements	2.0
PHTH 5450	Patient Care Principles	2.0
		15 credits

Semester 3	Spring	
PHTH 5540	Clinical Medicine I	2.0
PHTH 5550	Therapeutic Exercise	3.0
PHTH 5560	Biomechanics & Movement Science II	3.0
PHTH 5570	Neuroscience/Neuropathology	3.0
PHTH 5580	Physical Agents	3.0
PHTH 5590	Research I	1.0
		15 credits

YEAR 2

Semester 4	Summer	
PHTH 6340	Electrotherapeutics	2.0
PHTH 6350	Clinical Medicine II	3.0
PHTH 6360	Clinical Education	3.0
PHTH 6390	Research II	1.0
		9 credits

Semester 5	Fall	
PHTH 6420	Principles of Education	2.0
PHTH 6440	Cardiopulmonary	3.0
PHTH 6460	Orthopedics I	4.0
PHTH 6470	Neurological PT I	4.0
PHTH 6490	Research III	2.0
		15 credits

Semester 6	Spring	
PHTH 6530	Psychosocial Behavioral Issues II	2.0
PHTH 6540	Prosthetics & Orthotics	3.0
PHTH 6560	Orthopedics II	4.0
PHTH 6570	Neurological PT II	4.0
PHTH 6590	Research IV	2.0
		15 credits

YEAR 3

Semester 7	Summer	
PHTH 7320	Administration & Management	2.0
PHTH 7350	Clinical Education II	4.0
PHTH 7360	Advanced Clinical Topics I	2.0
PHTH 7370	Clinical Case Conference I	2.0
		10 credits

Semester 8	Fall	
PHTH 7410	Clinical Integration Seminar	2.0
PHTH 7450	Clinical Education III	6.0
PHTH 7460	Advanced Clinical Topics II	2.0
PHTH 7470	Health and Wellness	3.0
PHTH 7480	Professional Issues	1.0
PHTH 7490	Research V	1.0
		15 credits

Semester 9 Spring

PHTH 7550 Clinical Education IV	5.0
PHTH 7560 Clinical Education V	5.0
PHTH 7570 Clinical Case Conference II	2.0
	12 credits
	Total Credits: 115

COURSE DESCRIPTION

PHTH 5360 GROSS ANATOMY (6) The purpose of this course is to provide the students with an understanding of gross structures of the human body with emphasis on musculoskeletal and neurovascular structures. Each topic of the course will be discussed from three aspects of conceptual overview, regional anatomy and surface anatomy. Content sequence of the course is anatomy of the back, thorax, upper limb, pelvis, lower limb, head and neck. Prerequisites: Student must be officially admitted into the Physical Therapy program and/or have prior consent of the instructor

PHTH 5380 INTRO TO PHYSICAL THERAPY (1) This course is designed to introduce the student to the profession of Physical Therapy including the Tennessee State Practice Act, characteristics of professions, history of the physical therapy profession, standards for professional conduct, the APTA's Code of Ethics, and the Guide for Professional Conduct. Students will also be introduced to HIPAA, the Generic Abilities, and the concept of active learning and problem solving. Prerequisites: Student must be officially admitted into the Physical Therapy program and/or have prior consent of the instructor

PHTH 5330 PSYCHOSOCIAL BEHAVIORAL ISSUES (2) An introductory and basic course in a series of four psychosocial classes addresses a variety of psychological and social issues. The introduction of and continuing development of cultural awareness/sensitivity as a part of developing cultural competence will be threaded throughout the course. There will be a review of psychological disorders that impact the practice of physical therapy. Students will learn the art of problem solving and critical thinking. Students are required to participate in service learning activities to enhance their ability to become culturally sensitive as they prepare to work in a multicultural and ever changing world. Prerequisites: Student must be officially admitted into the Physical Therapy program and/or have prior consent of the instructor

PHTH 5470 APPLIED PHYSIOLOGY (3) This course will provide the students with an in-depth understanding of the human physiological systems at the system, cellular, and molecular levels. A large emphasis is placed on the acute and chronic responses of the physiological systems to change the environment, stress, disease, and aging as well as on the biochemistry of various control systems. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

PHTH 5490 PATHOLOGY (3) The fundamental issues in health and disease, including some of the basic terminology and concepts used in pathology will be introduced. The focus will be on relating normal physiology of specific organ systems to signs and symptoms "clinical red flags" that indicate disease. The implications pathological conditions pose for the Physical Therapist and conditions frequently found during therapy sessions that need to be referred for further medical evaluation will be discussed. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

PHTH 5460 BIOMECHANICS AND MOVEMENT SCIENCE I (3) This course provides an introduction to the basic concepts of biomechanics and kinesiology as it relates to the normal human body. The focus in this class is on the anatomical and biomechanical properties of bone, cartilage, tendon, ligaments, and joints. The specific joint and tissue structures, and functions that will be analyzed include: the shoulder, elbow, wrist, and hand, as well as the head facial muscle, and TMJ. Students will discuss and analyze the differences among the culturally diverse populations and across the lifespan. Students will also be introduced to common pathological conditions that affect the movement and biomechanics of the above mentioned anatomical regions. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

PHTH 5440 HUMAN DEVELOPMENT ACROSS THE LIFESPAN (2) The study of human growth and development throughout the life span focuses on normal development especially as it relates to functional movement. The course starts with a review of genetics and developmental theories. The life span, starting with prenatal development and ending with aging is

addressed in relationship to the psychological-sociocultural domains. The relationship between motor development, motor learning, and motor control is addressed. The development of the body systems are reviewed so that the relationship can be established in relationship to function. The importance of wellness and prevention is discussed as students are let to recognize the importance of maintaining good health and preventing disease. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

PHTH 5421 TESTS AND MEASUREMENT (2) This course will introduce the students to the concepts of palpation, limb length and girth measurement, manual muscle testing, and goniometry. The basic concepts of joint mobilization and observational posture and gait analysis will be covered. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

PHTH 5450 PATIENT CARE PRINCIPLES (2) Students will be introduced to the basic skills involved in patient transfers, bed mobility, patient positioning, body mechanics, and taking and interpreting vital signs. The teaching of how to use assistive devices (Tilt Table, Parallel bars, Walkers, canes, crutches) will be covered. One-third of the course time will be laboratory/psycho-motor experience. Students will show proficiency in the performance of these basic physical therapy skills. The course also covers documentation using the SOAP format and functional outcome reporting. The use of a medical chart, abbreviations, and medical terminology will be emphasized. Prerequisites: Students must have passed all of the 1st semester course and/or have prior consent of the instructor

PHTH 5540 CLINICAL MEDICINE I (2) This course introduces students to principles and methods of medical screening in physical therapy practice and to diagnostic imaging, laboratory testing and other medical diagnostic procedures. A basic format for orthopedic and neuromuscular medical screening and differential diagnosis in physical therapy is presented and the role of the physical therapist as it interfaces with the role of the physician is emphasized. Basic concepts of pharmacology are also covered including classes of drugs, indications, therapeutic effects, side effects and implications for physical therapy practice. Strategies to effectively and appropriately communicate with health care colleagues and patients regarding medical diagnostic information and medical status are introduced. Prerequisites: Must have completed 2nd semester of professional program and/or permission of instructor.

PHTH 5550 THERAPEUTIC EXERCISES (3) This course is designed to introduce students to therapeutic techniques as a tool for restoring and improving the musculoskeletal status of a patient. It will provide a foundation of appropriate exercise principles, and techniques used for joints, muscles, and soft tissue conditions. There will be an emphasis on the identification of patient problems through skillful evaluation, and the establishment of a plan to meet these goals. The laboratory component is designed to go along with the didactic coursework. It will introduce students to the hands on experience of using therapeutic exercise as a tool for restoring and improving the musculoskeletal status of a patient. It will provide a foundation of appropriate exercise techniques used for joints, muscles, and soft tissue conditions. Prerequisites: Completion of the 2nd semester of the professional program and/or permission of the instructor.

PHTH 5560 BIOMECHANICS AND MOVEMENT SCIENCE II (3) This course starts with a review of the basic concepts of biomechanics and movement of the human body. Students will be exposed to lecture and hands on practical experience in this class. Focus in this section is on these specific anatomical regions: back (lumbar), lower extremity (hip, knee, ankle, foot). Students will be introduced to common pathological conditions associated with the above anatomical regions. An introduction to the neuromuscular control pathway associated with biomechanical movement is also included in this course. Prerequisites: Completion of the 2nd semester of the professional program and/or permission of the instructor.

PHTH 5570 NEUROSCIENCE/NEUROPATHOLOGY (3) This course is designed to provide the students with a working knowledge of the development, structure, function, and pathology of the nervous system via lectures, lab, and group discussions. The structure of the central nervous system (CNS), peripheral nervous system (PNS), and autonomic nervous system (ANS) will be studied as each relates to clinical neurology. This course will involve an analysis of the function of different components of the nervous system and how such function is altered or modified by injury, pathology, and aging. The content of the course is reinforced in the neuroscience laboratory. A section on neuropathology will also be presented. Prerequisites: Completion of 2nd semester of professional program and/or permission of the instructor.

PHTH 5580 PHYSICAL AGENTS (3) This course covers the use of physical modalities in the treatment of selected pathologies. The effects of physical principles and biophysical effects of physical therapy modalities will be covered. Indications, contraindications, and precautions for the use of physical therapy modalities will be stressed. Modalities covered include: ultrasound, phonophoresis, diathermy, moist heat, cryotherapy, hyperbaric oxygen, hydrotherapy, massage, ultraviolet, light therapy, paraffin wax, mechanical compression, and pressure garments. In addition, wound care management in relation to tissue repair, wound debridement and dressings, sterile techniques, pressure garments, and universal precautions will be addressed. Laboratory sessions are included with the course and cover the practical guidelines and clinical parameters in the administration of the physical therapy physical agents. Prerequisites: Completion of 2nd semester of professional program and/or permission of the instructor.

PHTH 5590 RESEARCH I (1) This course is the first in a series of five that leads to a final research project that fulfills the required writing and presentation of that project to the faculty. This course provides a basic exploration of the fundamentals necessary for scientific inquiry. Topics include: literature review, formation of a research hypothesis, rules of measurement, research methodology, use of human subjects, reliability, validity, sampling methods, threats to internal validity, introduction to general statistical designs. The course also presents the students with the views that physical therapy is in need of scientific—evidence based research. First, the students will be introduced to research fundamentals including not only general research theory but also research in physical therapy, theory in physical therapy research and research ethics. Second, students will learn how to critically read and evaluate the literature. Third, this course will provide students with skills needed to conduct a literature search off- and on-line databases. Fourth, the students will learn how to develop an answerable research question and how to evaluate research problems. Finally, the students will learn about plagiarism, how to properly cite references, and understand the importance of protecting one's intellectual property. Prerequisites: Completion of 2nd semester of professional program and/or permission of the instructor.

PHTH 6340 ELECTROTHERAPEUTICS (2) This course is designed to prepare the student in the application of electrotherapeutic procedures and the interpretation of electrodiagnostic tests to treat patients with disorders of the neuromusculoskeletal system. The course will discuss electrotherapy theory, testing and procedures. The laboratory course is taught in conjunction with the lecture course Electrotherapeutics. The course covers the guidelines and clinical parameters in the administration of various electrotherapeutic modalities in the diagnosis and treatment of selected pathologies. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6350 CLINICAL MEDICINE II (3) This course introduces students to principles and methods of medical screening in physical therapy practice and to diagnostic imaging, laboratory testing and other medical diagnostic procedures. A basic format for orthopedic and neuromuscular medical screening and differential diagnosis in physical therapy is presented and the role of the physical therapist as it interfaces with the role of the physician is emphasized. Basic concepts of pharmacology are also covered including classes of drugs, indications, therapeutic effects, side effects and implications for physical therapy practice. Strategies to effectively and appropriately communicate with health care colleagues and patients regarding medical diagnostic information and medical status are introduced.

PHTH 6360 CLINICAL EDUCATION I (3) This course allows for the first formal exposure to clinical practice settings for 4 weeks in clinical facilities. It gives the student the opportunity to observe physical therapy evaluation and treatment of patients, as well as providing an opportunity to practice clinical skills learned during the first year of the program. The student will be assigned to a clinical facility for a four week period. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6390 RESEARCH II (1) This course is the second in a series of five, designed to help students understand how research applies to the profession of physical therapy. The objective of these courses is to help the students to develop the skills needed to design and implement a research project. Students will develop a professional research manuscript and present it to the physical therapy faculty and their peers. These courses are primarily experimental. Therefore all students must be actively engaged in a research project in order to fulfill the requirements of these courses. The focus of this course is threefold. First, this course will acquaint the students with the basics of research design, including research questions and problems, experimental and non-experimental research, validity, sampling, and research paradigms. Second, the students will be presented with testing

and measurement in physical therapy research. This includes measurement theory, mythological research and instrumentation in physical therapy research. Third, the basic principles of statistics as they apply to research in physical therapy will be reviewed. This includes parametric and non-parametric tests, criteria used to select a statistical test and interpreting significant and non-significant results. Upon completion of this course, the students will have completed a research proposal (including literature review) which will be implemented in the successive courses. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6420 PRINCIPLES OF EDUCATION (2) This course is taught in a block format. It is designed to present educational principles as it applies to the practice of physical therapy in an academic as well as in a clinical setting. Various theories of learning and variations in teaching and learning styles will be discussed. The role of the physical therapist as a teacher will be presented. Strategies that will make patient and family education more effective and efficient will be discussed. Students will develop, present, and evaluate educational presentations that are appropriate for patient care givers, health care professionals, industry or other community group. Students will discuss the need for life long learning, and seek for ways to enhance future teaching for physical therapist. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6440 CARDIOPULMONARY (3) This is a lecture course taught in conjunction with a laboratory. The course includes a review of anatomy and physiology of the cardiovascular and respiratory systems. The course covers restrictive lung diseases, Chronic Obstructive Pulmonary diseases, ischemic cardiac conditions and cardiac muscle dysfunctions; cardiopulmonary implications of other specific and systemic diseases are also studied. Specific diagnostic tests and procedures used in cardiopulmonary care are covered as well as fitness evaluation, health risk assessment, and exercise evaluation. Emphasis is placed on identification of risk factors and important aspects of preventive medicine in the care of the patient with cardiopulmonary dysfunction. The laboratory course is taught in conjunction with the lecture course. A case based approach will be used to interpret evaluative findings and make decisions regarding therapeutic interventions. Emphasis is placed on cardiopulmonary diseases and conditions including: ischemic cardiac conditions, cardiac muscle dysfunctions, restrictive lung disease, chronic obstructive pulmonary disease, and other specific diseases. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6460 ORTHOPEDICS I (4) This course begins with the hypothesis-oriented algorithm described by Echternach and Rothstein, which will form the framework the students will use to aid them in clinical decision making. The procedures covered include spinal traction, peripheral joint mobilization, myofascial manipulation, taping and special tests. The anatomical regions covered are the TMJ, the cervical spine, the thoracic spine and ribs, the shoulder, the elbow, and the wrist and hand. Posture and fractures are also covered. The laboratory course is taught at the same time as the lecture course entitled Orthopedics I. The orthopedic procedures covered include: spinal traction, peripheral joint mobilization, myofascial manipulation, taping and special tests. The anatomical regions covered are the TMJ, the cervical spine, the thoracic spine and ribs, the shoulder, the elbow, wrist and hand. Posture is also covered. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6470 NEUROLOGICAL PT I (4) This course is the first of two courses that provides in-depth exploration of the assessment and intervention procedures used with clients with various neurological pathologies across the life span. This course focuses on the neurological problems acquired in adulthood. The students will apply knowledge of basic anatomy and physiology of the human nervous system to evaluation and treatment planning for the patient with neurological dysfunction. Case studies will be used to introduce various pathologies. Cases will be used as the basis for discussion and problem solving sessions on evaluation, goal setting, and planning the course of treatment. Modifications to goals and treatment issues when dealing with variations in the clinical pictures of patients with similar diagnosis will be discussed. Textbook reading will be supplemented with recent research articles to discuss recent advances in diagnosis and treatment of various neurologic conditions. The laboratory course is taught in conjunction with the lecture course, Neurological Physical Therapy. This course builds upon foundations established in Neuroscience/Neuropathology as a foundation from which to implement a problem solving approach in the evaluation and treatment of patients with various neurological disorders. Emphasis is placed on critical analysis of the neurological assessment procedures, motor control theory and principles of therapeutic management through case analysis, demonstration and discussion. Patients with various neurological diagnosis will be brought to the lab for as-

assessment and treatment demonstration and for practicing. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6490 RESEARCH III (2) This course is the third in a series of five designed to help students understand how research applies to the profession of physical therapy. The objective of these courses is to help the students to develop the skills need to design and implement a research project. Students will develop a professional research manuscript and present it to the physical therapy faculty and their peers. These courses are primarily experimental. Therefore all students must be actively engaged in a research project. This course will provide students with the skills and opportunity to obtain approval from the Institutional Research Board (IRB) and the collection and analyzing of data in order to answer specific research questions or hypothesis. The emphasis of this course is fourfold. First, to obtain approval from the IRB to conduct research. Second, to recruit and screen potential subjects and assign volunteers to treatment groups. Third, to collect data which will answer a specific research hypothesis. Finally, to analyze the data using a statistical software program (e.g. SPSS) and to interpret the results from the data analysis. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6530 PSYCHOSOCIAL BEHAVIORAL ISSUES II (2) The learning experience revolves around the professional and ethical issues. Personal assessment in preparation to becoming a practicing professional with social responsibilities will be included. Non traditional approaches in health and healing will be discussed. The relevant threads of culture and diversity will be included throughout the course content. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6540 PROSTHETICS & ORTHOTICS (3) This course introduces the students to various prosthetic and orthotic devices used by patients with various conditions, which necessitate their use. The course is divided into two broad areas, namely: Prosthetic Assessment and management, and Orthotics Management and Assessment. The prosthetic portion of the course introduces the students to various upper and lower extremity prosthetic devices in relation to the different levels of amputation. The Orthotics portion of the course introduces the students to various upper extremity, lower extremity, and spinal orthotic devices in relation to various conditions that warrant their use. Both prosthetic and orthotic portions of the course also address the physical therapist role in prosthetic and orthotic management, including prescription, maintenance, and training. . Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 6560 ORTHOPEDICS II (4) The course begins with a review of the hypothesis-oriented algorithm described by Echternach and Rothstein. The procedures covered include: special tests, gait, and body composition. The anatomical regions covered are: the lumbar spine, the pelvic region, hip, knee, ankle, and foot. Pediatric and geriatric orthopedic physical therapy will be emphasized. The laboratory course is taught in conjunction with the lecture course Orthopedics II. The procedures covered include: spinal traction, peripheral joint mobilization, myofascial manipulation, taping, and special tests. The anatomical regions covered are: the lumbar spine, the pelvic region, hip, knee, ankle, and foot. Also covered are pediatric and geriatric physical therapy. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6570 NEUROLOGIC PHYSICAL THERAPY II (4) This course is the second of two courses that provides in-depth exploration of the assessment and intervention procedures used with clients with various neurological pathologies across the life span. This course focuses on the neurological problems present from birth or acquired in childhood or late in life. The students will apply knowledge of basic anatomy and physiology of the human nervous system to evaluation and treatment planning for the patient with neurologic dysfunction. Case studies will be used to introduce various pathologies. Cases will be used as the basis for discussion and problem solving sessions on evaluation, goal setting and planning the course of treatment. We will branch out from the cases to discuss modifications to goals and treatment issues when dealing with varying clinical pictures of those individuals with the same diagnosis. Textbook reading will be supplemented with recent research articles to discuss recent advances in diagnosis and treatment of various neurologic conditions. The laboratory course is taught in conjunction with the lecture course, Neurologic Physical Therapy II. This course builds upon foundations established in Neurologic Physical Therapy I as a foundation from which to implement a problem solving approach in the evaluation and treatment of patients with various neurological disorders. Emphasis is placed on critical analysis of the neurological assessment procedures, motor control theory and principles of therapeutic management through case analysis, demonstration and discussion. Patients with various neurological diagnosis will be brought to the lab for assessment and treatment demonstration and for

practicing. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 6590 RESEARCH IV (2) This course is the fourth in a series of five designed to help students understand how research applies to the profession of physical therapy. The objective of these courses is to help the students to develop the skills needed to design and implement a research project. Students will develop a professional research manuscript and present it to the physical therapy faculty and their peers. These courses are primarily experimental. Therefore all students must be actively engaged in a research project in order to fulfill the requirements of these courses. This course will provide students with the skills and opportunity to draw conclusions about their research questions or hypothesis and write their research manuscript. The emphasis of this course is threefold. First, to draw conclusions about the research project based on the analysis of their findings. Second, to develop the literature review, results, discussion, conclusions, and recommendation chapters of the research manuscript following the guidelines of Tennessee State University. Each research team is expected to submit two copies of the final draft by the end of the semester. Third, to discuss the editing process and publication in refereed journals. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 7320 ADMINISTRATION/MANAGEMENT (2) This course presents management principles as they apply to the practice of physical therapy. Students will analyze the impact of organizational design, leadership styles, as well as legal, social, economic, and ethical issues. Emphasis will be placed on fiscal operation, personnel and risk management, strategic planning, quality assessment, and role of the physical therapist as a consultant. The structure and function of the health care system in the United States is presented with emphasis on the impact of the different systems on physical therapy are presented. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 7350 CLINICAL EDUCATION II (4) This course provides a hands on experience for the student in selected clinical environments. This course will allow the student an opportunity to practice the clinical skills learned during the professional component of the program. The student will be assigned by the ACCE to a clinical facility for four weeks. The student will be supervised by a licensed physical therapist. The student will be evaluated on their clinical performance using the APTA's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor(s) in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisites: Completion of the first year of study in Physical Therapy.

PHTH 7360 ADVANCED CLINICAL TOPICS I (2) Students will choose from a list of specialty content areas relative to the advanced practice of Physical Therapy. A faculty member and mentor guide the student to the resources available for better understanding of the content area. The student will be responsible, with the assistance of the faculty member and mentor, to set up experiential opportunities within the area of specialty. The student will present a final paper and presentation to peers and faculty members demonstrating that the course objectives were met and to share the experience.

PHTH 7370 CLINICAL CASE CONFERENCE I (2) Students lead case discussions based on their practical experiences in PHTH 7050 (Clinical Education II). Written reports on the cases are completed in formats appropriate for professional publication or presentation.

PHTH 7410 CLINICAL INTEGRATION SEMINAR (2) Students analyze complex cases using a variety of decision making frameworks and perspectives. Cases selected emphasize co-morbidities, psychosocial factors, and ethical and financial issues that influence physical therapy practice. Cases are chosen that represent a variety of clinical practice settings.

PHTH 7450 CLINICAL EDUCATION III (6) This course provides a hands on experience for the student in selected clinical environments. Students will have an opportunity to practice the clinical skills learned during the professional component. The student will be assigned to a clinical facility for eight weeks. The student will be supervised by a licensed physical therapist. The student's clinical performance will be evaluated by the Clinical Instructor using the American Physical Therapy Association's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 7460 ADVANCED CLINICAL TOPICS II (2) Students will choose from a list of specialty content areas relative to the advanced practice of Physical Therapy. A faculty member and mentor guide the student to the resources available for better understanding of the content area. The student will be responsible, with the assistance of the faculty member and mentor, to set up experiential opportunities within the area of specialty. The student will present a final paper and presentation to peers and faculty members demonstrating that the course objectives were met and to share the experience.

PHTH 7470 HEALTH AND WELLNESS (3) Theories of wellness and formats for prevention and screening programs are the focus of this course. Work-site wellness and rehabilitation is covered. Lifespan and cultural variables that impact wellness needs and wellness program designs are emphasized. Roles for physical therapists as consultants in fitness and wellness are introduced. Practical experiences in community health education in culturally diverse environments and in work-site assessment and education are components of this course. Students are expected to be able to analyze population needs for wellness and health services and to develop culturally appropriate programs that enhance health, wellness, and safety and improve quality and productivity in life and work. Prior knowledge of educational theory and methods from PHTH 6020 is applied in this course.

PHTH 7480 PROFESSIONAL ISSUES (1) This course offers interactive learning experiences, assists the learner with acquiring the advanced skills required to enter the practice arena. These skills will include but not be limited to consultative services, resume development, job search, and the provision of pro bono services. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 7490 RESEARCH V (1) This course is the last in a series of five designed to help students understand how research applies to the profession of physical therapy. The objective of these courses is to help the students to develop the skills needed to design and implement a research project. Students will develop a professional research manuscript and present it to the physical therapy faculty and their peers. These courses are primarily experimental. Therefore all students must be actively engaged in a research project in order to fulfill the requirements of these courses. The focus of this course is to introduce the students to professional presentation. Each research team is expected to develop a multimedia presentation of their research findings and to develop a communicative poster presenting their research findings. During the course of this class, the students will be required to present their research findings to the faculty and peers during the Physical Therapy Research night. The students are also expected to present their poster to the physical therapy faculty and their peers. Students are encouraged to present their research findings in local and national meetings. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 7550 CLINICAL EDUCATION IV (5) This course provides a hands on experience for the student in selected clinical environments. Students will have an opportunity to practice the clinical skills learned during the professional component. The student will be assigned to a clinical facility for seven weeks. The student will be supervised by a licensed physical therapist. The student's clinical performance will be evaluated by the Clinical Instructor using the American Physical Therapy Association's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor's in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 7560 CLINICAL EDUCATION V (5) This course provides a hands on experience for the student in selected clinical environments. Students will have an opportunity to practice the clinical skills learned during the professional component. The student will be assigned to a clinical facility for seven weeks. The student will be supervised by a licensed physical therapist. The student's clinical performance will be evaluated by the Clinical Instructor using the American Physical Therapy Association's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor's in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

PHTH 7570 CLINICAL CASE CONFERENCE II. (2) Students lead case discussions based on their practical experiences in PHTH 7250 (Clinical

Education IV) and PHTH 7260 (Clinical Education V). Written reports on the cases are completed in formats appropriate for professional publication or presentation. Classroom presentations are in format appropriate for professional presentation.

GRADUATE FACULTY

Ronald De Vera Barredo, Assistant Dean and Associate Professor

B.S., 1990, University of the Philippines; M.A., 1995, Trevecca Nazarene University; Ed.D., 2002, Trevecca Nazarene University; D.P.T., 2005, Rocky Mountain University of Health Professions

Thomas P. Bukoskey, Assistant Professor

B.S. and M.S., 1993, D'Youville College; DPT, 2005, Creighton University

Karen Coker, Assistant Professor

B.S., 1985, Middle Tennessee State University; B.S., 1986, University of Tennessee, Memphis; DPT, 2006 University of Tennessee Health Science Center

Deborah Edmondson, Associate Professor

A.A., 1974, Hiwassee College; B.S., 1976, Middle Tennessee State University; B.S., 1977, University of Tennessee, Memphis, Health Science Center; M.S., 1994, University of St. Francis; Ed.D., 2001, Tennessee State University

Natalie Housel, Associate Professor

BS, 1981, Ithaca College; MA, 1986, Fairfield University; Ed.D., 2002, University of Central Florida

David Lehman, Associate Professor

B. S., 1987, Florida State University; M.S., 1989, University of Miami; Ph.D., 2002, Florida State University

Rosalyn Pitt, Associate Professor

B.S., 1971, Loma Linda University; M.S., 1989, Tennessee State University; Ed.D., 2002, Tennessee State University

Edilberto A. Raynes, Assistant Professor

B.A., 1984 De La Salle University; Doctor of Medicine, 1991 University of the City of Manila; Pediatric Residency Training, 1995 Manila Hospital

DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY

**Harold R. Mitchell, Ph.D., CCC/SLP, Head
Avon Williams Campus
Office: 330 10th Avenue Suite A
(615) 963-7081**

MAJOR: SPEECH AND HEARING SCIENCE

DEGREE: MASTER OF SCIENCE (M.S.)

The Department of Speech Pathology and Audiology offers a course of study leading to a Master of Science Degree in Speech and Hearing Science. Certification and licensure to practice as a Speech-Language Pathologist requires a master's degree as entry level. The Speech and Hearing Science major has a curriculum that leads to certification by the American Speech-Hearing-Language Association (ASHA), to Education Endorsement for public schools, and to licensure from the State of Tennessee and other states in Speech-Language Pathology.

The curriculum requires approximately two years of full-time study beyond an acceptable Bachelor's degree. The curriculum consists of forty-one (41) semester hours of required courses plus a comprehensive examination and/or thesis. The program also requires a minimum of five (5) additional credit hours of clinical practicum during which the student must obtain 400 clock hours of clinical practicum experiences under the supervision of certified clinicians (CCC-SLP or CCC-A) in nine (9) areas of speech-language intervention and treatment across the lifespan.

Students entering the program may be required to enroll in undergraduate or prerequisite courses.

The curriculum emphasizes comprehensive understanding of normal communicative processes, including reception, integration, and expression. It also emphasizes in-depth analyses of communicative disorders, giving special attention to techniques for diagnosis, remediation, and management. Students plan their curriculum in consultation with an advisor. For employment in the school systems, graduate students may complete requirements for Education Endorsement however, these requirements are in addition to those required for the degree.

The Department supplements classroom instruction with required, supervised, clinical observation and practicum experiences in speech-language pathology and audiology. To meet requirements for graduation, students must formally enroll in practicum each semester in residence and must obtain the minimum requirement of clock hours for certification by ASHA.

A maximum of seventy-five (75) clock hours may be applied toward ASHA certification requirements by those students who participated in practicum at the undergraduate level.

Practicum experiences, applicable toward ASHA certification, are provided by the on-campus Speech and Hearing Center. The Center provides diagnostic and clinical services to children and adults in the Nashville-Davidson County area. To further accomplish training objectives, students are assigned to off-campus practicum sites for diagnostic and clinical experiences and involvement in interdisciplinary team approaches to case management.

Opportunities exist for students to obtain diverse clinical experiences by means of the Department's affiliations with the public-school system, child-care centers, habilitation and rehabilitation facilities, hospitals, and health-care facilities in the Nashville-Davidson County area and throughout Middle Tennessee.

The graduate program is accredited by the Council on Academic Accreditation (CAA) of the American Speech Language and Hearing Association (ASHA). ASHA implemented new Standards for the Certificate of Clinical Competence in Speech-Language Pathology in 2005. Students who did not apply for certification prior to January 1, 2005 may be required to take additional coursework and clinical practica in order to provide evidence of knowledge and skills pertinent to the field of speech language pathology.

Essential Functions

The Department of Speech Pathology and Audiology has created a list of Essential Functions which are task-and attribute-based criteria needed to successfully achieve professional entry-level competencies. The Essential Functions of Speech-Language Pathologists establishes the expectations and requisite abilities considered necessary in the field of speech-language pathology.

Below are the essential functions that someone who enters the Speech-Language Pathology program must meet. The ability to perform, either independently or with reasonable accommodation, the following essential functions for clinical practicum in Speech/Language Pathology and Audiology:

1. Critical thinking skills sufficient for clinical judgment;
2. Interpersonal skills sufficient for effective interaction with individuals and families from a variety of cultural backgrounds;
3. Communication skills sufficient for effective written and spoken interaction with others;
4. Able to comprehend and read professional literature/reports and write university level papers and clinical reports in English
5. Physical mobility sufficient to move from room to room and maneuver in small spaces;
6. Able to participate in classroom or clinical activities for 2-4 hour blocks of time with 1 or 2 breaks
7. Able to move independently to, from and in academic/ clinical facilities
8. Gross and fine motor abilities sufficient for manipulation of evaluation and treatment instruments and materials;
9. Able to respond quickly enough to provide a safe environment for clients in emergency situations, including fire, choking, etc. and in application of universal precautions (standardized approach to infection control).
10. Visual acuity, hearing sensitivity and auditory discrimination sufficient for client evaluation and treatment;
11. Able to implement speech, language diagnostic and hearing screening procedures; administer and score instruments, interpret results and make appropriate recommendations and decisions, including the ability to evaluate and generalize appropriately without immediate supervision
12. Able to select, develop and implement comprehensive intervention strategies for treatment of communication and related disorders
13. Able to maintain attention and concentration for sufficient time to complete academic/clinical activities, typically 2-4 hours with 1-2 breaks.
14. Able to maintain appropriate work place behavior, including understanding and respect for supervisory authority, punctuality and regular attendance.

Criminal Background Check

A criminal background check and/or drug screens may be a requirement at some affiliated clinical sites for training. Based on the results of these checks an affiliated clinical site may determine to not allow students at their facility. This could result in the inability to successfully complete the requirements of this program. Additionally, a criminal background may preclude licensure or employment. If criminal background checks or drug screens are required, students are expected to cooperate fully with the process and pay all associated costs. Tennessee State University and the Speech Pathology and Audiology Department are not liable if the results of a criminal background check or a drug screen indicate that a student is unable to complete the requirements of the program or if such results preclude one from obtaining licensure or employment. [Note: All applicants for initial speech-language pathology licensure in Tennessee must obtain a criminal background check]

ADMISSION REQUIREMENTS

Formal admission to the Department of Speech Pathology and Audiology is made through the Graduate School of Tennessee State University. All admission materials should be filed with the Graduate School by February 1st prior to the fall semester in which the student wishes to enroll.

The applicant must submit three letters of recommendation highlighting strengths, weaknesses, and general abilities. Students are encouraged to include a statement of intent with their application. Acceptance into the Program is highly competitive.

Unconditional admission to the master's degree program requires a bachelor's degree and completion of the necessary prerequisite courses. If evaluation of an applicant's undergraduate degree program shows prerequisite deficiencies, the student must complete each of the prerequisite courses prescribed before unconditional status is achieved.

For admission with unconditional classification, in addition to the above, the student must have a grade point average (GPA) of 3.5; a minimum combined score (verbal + quantitative) on the Graduate Record Examination (GRE) of 800 or a minimum score on the Miller Analogies Test (MAT) of 380.

For admission with conditional classification, the student may possess a GPA between 2.5 and 3.4 with an acceptable GRE or MAT score. The student with an acceptable GPA and a minimal combined score (verbal + quantitative) on the GRE of 600 or a minimum score on the MAT of 370 may also be considered for conditional admission. The student's classification is changed to unconditional if a 3.00 or better GPA is attained in the first 9 credit hours of graduate coursework. Any exception to these standards must be approved by the Graduate Selection Committee of the Department, Department Head, School Dean and Graduate Dean.

Applicants with practicum experiences in speech-language pathology and audiology must have proper documentation, including appropriate signatures and certification status (CCC/SLP or CCC/A).

Financial Assistance

Upon acceptance into the graduate program, students may apply for available stipends or other financial aid.

DEGREE REQUIREMENTS

Students must apply for admission to candidacy after earning nine (9) to fifteen (15) semester hours of graduate credit. Students must choose the thesis or non-thesis option at the time they are admitted to candidacy.

The master of science degree requires a minimum of forty-one (41) semester hours of coursework plus a comprehensive examination for the non-thesis option. Additionally, students must formally enroll in practicum (SPTH 5510 and/or SPTH 5710) each semester in residence and must obtain the minimum requirement of clock hours for certification by ASHA.

Students electing the thesis option must enroll in SPTH 5120: Thesis Writing the semester in which they anticipate graduation.

PROGRAM OF STUDY

Core Courses: Forty-one (41) Hours

SPTH 5110	Methods of Research	2
SPTH 5520	Studies in Articulation	3
SPTH 5530	Neuroanatomy & Neurophysiology	3
SPTH 5570	Anatomy & Physiology of Speech	3
SPTH 5580	Voice Disorders	3
SPTH 5630	Adult Aphasia	3
SPTH 5740	Advanced Audiology	3
SPTH 5750	Seminar in Aural Rehabilitation	3
SPTH 6400	Neurogenic (Motor Speech) Disorders	3
SPTH 6420	Multicultural Literacy & Cultural Diversity	3
SPTH 6530	Seminar in Stuttering	3
SPTH 6540	Studies in Organic Speech Disorders	3
SPTH 6550	Seminar in Language Development	3
SPTH 6560	Studies in Language Disorders	3

Clinical Practicum

SPTH 5510	Advanced Clinical Practicum: Speech-Language	1-6
SPTH 5710	Advanced Clinical Practicum: Audiology	1-6

Optional

SPTH 5250	Methods of Speech and Hearing Services in the School Setting*	3
SPTH 5120	Thesis (optional)**	4

* Required for students desiring Education Endorsement

** Required only for students writing thesis

COURSE DESCRIPTION

SPTH 5110. METHODS OF RESEARCH. (2) Course which provides an overview of the nature of research designs. The course introduces students to the classification of research. It helps students design and conduct an original piece of research, introducing acceptable writing styles and statistical data.

SPTH 5120. THESIS WRITING. (4) A course designed to provide the student with an opportunity to germinate, develop, and study a special area of interest. The student is guided by the principles of the scientific method, and collects and interprets data in accordance with these principles.

SPTH 5250. METHODS OF SPEECH AND HEARING SERVICES IN THE SCHOOL SETTING. (3) Prepares the student for effective performance in the school setting in providing treatment programs for the various communication disorders within the pre-K-12 grades. This course addresses the logistics and specifics of providing speech, hearing, and language services within the educational team's multidisciplinary format.

SPTH 5500. REGIONAL DIALECTS AND URBAN LANGUAGE STUDIES. (3) Study of American-English speech sounds and language usage in the context of the historical development of the English language. Major consideration is given to dialectal variations with emphasis on differences versus disorders. Multicultural education and intercultural-communication studies are featured throughout the course. Linguistics and sociolinguistics are included.

SPTH 5510. ADVANCED CLINICAL PRACTICUM: SPEECH-LANGUAGE. (1-6) Clinical opportunities in the diagnosis evaluation, remediation, management, and counseling of persons with speech-language impairments. All clinical practica are under the supervision of ASHA certified personnel. A required course offered each semester or summer session in residence and that is repeatable (a thru f) up to 6 semester hours.

SPTH 5520. STUDIES IN ARTICULATION. (3) Current research studies in articulatory acquisition and behavior. A review of research related to the diagnosis, nature, etiology, and treatment of articulatory disorders is also included.

SPTH 5530. NEUROANATOMY AND NEUROPHYSIOLOGY OF SPEECH AND HEARING. (3) Structure, function and vascular supply of the central nervous system. Signs, symptoms, and treatment and prognosis of disorders resulting from damage to specific areas of the central nervous system with emphasis on speech, language, and auditory function.

SPTH 5560. EXPERIMENTAL PHONETICS. (3) Overview of the physiological and acoustical analyses in speech perception. Integration of these areas are included with emphasis on the development of the theories associated with speech production and perception.

SPTH 5570. ANATOMY AND PHYSIOLOGY OF SPEECH. (3) Detailed study of the anatomical and physiological structures as well as functions of the speech mechanism and its processes.

SPTH 5580. VOICE DISORDERS. (3) An interdisciplinary approach to the detection, diagnosis, and therapy in the management of structural, functional and psychogenic voice disorders, and laryngectomy.

SPTH 5600-5605-5606-5607. INDEPENDENT STUDY. (3-9) Independent research or literature survey of an area appropriate to communication disorders. consent of the instructor and the major advisor are required.

SPTH 5630. ADULT APHASIA. (3) Study of the characteristic nature (etiology and symptomatology) of aphasic disturbances, including principles of evaluation, treatment and management.

SPTH 5670. INTRODUCTION TO HUMAN COMMUNICATION AND ITS DISORDERS. (3) A course designed to acquaint teachers, special educators and graduate students with the nature and types of speech, hearing, and language disorders. Rehabilitation and management techniques are explained.

SPTH 5710. ADVANCED CLINICAL PRACTICUM: AUDIOLOGY. (1-6) Practical experience in the management of the hearing impaired population. Includes case history, report writing, diagnostic procedures, aural rehabilitation and counseling.

SPTH 5740. ADVANCED AUDIOLOGY. (3) The theory and practices of advanced techniques for the assessment of the audiological function; emphasis upon the use of tests in differential diagnosis of auditory lesions and functional hearing losses.

SPTH 5750. SEMINAR IN AURAL REHABILITATION. (3) Principles, methods and electroacoustical instrumentation involved in the aural habilitation/rehabilitation of hearing impaired persons. Includes oral and manual communication.

SPTH 5800. SPEECH SCIENCE & INSTRUMENTATION. (3) A study of the properties of sound, mechanisms of speech production and perception, and relevant speech science instrumentation. Two lecture periods and one laboratory (1 hour) per week.

SPTH 6400. NEUROGENIC (MOTOR) SPEECH DISORDERS. (3) A study of conditions that affect individuals affected by motor disturbances. Differential assessment of dysarthria and apraxia will be taught. Therapeutic programs will include the mechanisms of Phonation, Articulation, Resonation, and Respiration. Neuropathologies of motor speech disorders including etiologies and treatment strategies will be addressed.

SPTH 6420. MULTICULTURAL LITERACY AND CULTURAL DIVERSITY. (3) This course will examine: cross-cultural attitudes toward speech disorders; fluency disorders in multicultural populations; hearing disorders in multicultural populations; different learning styles in multicultural populations; and sociolinguistic tools and techniques.

SPTH 6430. CLINICAL PRACTICUM WITH MINORITY CHILDREN. (3) This course involves completing a practicum working with minority children. The clinical field experience will focus on assessment and remediation with minority children. Prerequisite: SPTH 6420.

SPTH 6530. SEMINAR IN STUTTERING. (3) Studies of traditional theories, and learning theory and conditioning (instrumental and respondent) in stuttering therapy. Examples of behavior modification in the treatment of stuttering will be analyzed and evaluated. Illustrations of operant conditioning therapy and two-factor (operant and classical) theory and therapy will be discussed.

SPTH 6540. SEMINAR IN ORGANIC SPEECH DISORDERS. (3) The study of the causes, diagnostic procedures, preventive measures, management techniques, and treatment of Cleft Palate, Cerebral Palsy, Laryngectomy and related organic disorders.

SPTH 6550. SEMINAR IN LANGUAGE DEVELOPMENT. (3) Study of the behavioral characteristics of language acquisition and developmental psycholinguistics. The structure and function of language are included.

SPTH 6560. STUDIES IN LANGUAGE DISORDERS. (3) A course designed to acquaint the student with traditional and contemporary methods of diagnosing, treating and managing various disabilities associated with impaired language capacity, with emphasis on current research and methods of investigation of language deficits.

Clinical Instructional Staff

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Graduate Faculty

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SCHOOL OF NURSING

SCHOOL OF NURSING

Bernardeen O. Fleming, Ed.D., R.N., Interim Dean

Office: Frederick S. Humphries

Family And Consumer Sciences And Nursing Education Complex 110

Phone: (615) 963-5251

MAJOR: NURSING

DEGREE: MASTER OF SCIENCE IN NURSING (M.S.N.)

CONCENTRATIONS:

**Nursing Education
Family Nurse Practitioner
Holistic Nursing**

**Office: Frederick S. Humphries
Family and Consumer Sciences and
Nursing Education Complex 312**

Phone: (615) 963-5252

The School of Nursing offers a Master of Science in Nursing (MSN) degree with three concentrations, one in Family Health Nursing, Holistic Nursing and the other in Nursing Education. The special mission of Tennessee State University School of Nursing master's program is to provide educational access for minority and non-traditional students. The MSN program provides a flexible curriculum with evening learning options for part-time students. Many courses are provided on-line and the Master of Science in Holistic Nursing degree is offered totally on-line as a distance program. The Master of Science in Nursing Education was designed and developed to provide students the opportunity to obtain the theory, skill and experience to teach within the college or university setting or within the education department of a clinical facility. Courses provide information on the operations of higher education organizations, on teaching and learning strategies, and in the area of curriculum development. Two practicum courses allow the student to learn through experience the role of the educator in both the classroom and clinical settings. The graduates of the program will enhance and advance their practice in settings of greatest need. Graduates of the Nursing Education concentration are prepared to become certified as a nurse educator.

Tennessee State University School of Nursing is in cooperation with the Regents Online Degree Program (RODP) to offer an on-line Master of Science in Nursing Degree. RODP students assigned to TSU as their home school will need to meet all admission requirements to the TSU Graduate School and TSU School of Nursing. The website at <http://www.rodg.org/> will provide more information to interested students about the Master of Science in Nursing Regents Online Degree Program.

Statement of Purpose

The curriculum of the Master's of Science in Nursing (MSN) program is based on the philosophy of the University and the School of Nursing. The purpose of the master's degree pro-

gram is to prepare nurses for advanced clinical practice and for nursing leadership and teaching positions in all types of health care settings. The MSN curriculum is organized to support students' progressive learning of advanced nursing knowledge and skills. The major concepts of the curriculum are advanced practice nursing roles, clinical management processes for families in primary and acute health care settings, hospice, holistic health care, theory and research based practice, and ethical, legal, and policy health care issues.

The program is designed to ensure students are knowledgeable in these areas:

1. Nursing theory and research concepts and their application to practice;
2. Advanced clinical practice; and
3. Role competence.

The program provides for a range of electives that complement the area of concentration. Students can transfer in six (6) hours of previous graduate level courses or choose two elective courses that support their individual educational goals. There is also the opportunity to carry out independent research (thesis) or to complete a guided Scholarly project. The master's program provides the foundation for doctoral study.

The MSN Program is fully approved by the National League for Nursing Accrediting Commission (NLNAC). The NLNAC is a resource for information about tuition, fees, and length of programs. For specific information contact the NLNAC at 61 Broadway, New York, NY 10006, 1-800-669-1656. The concentration in Holistic Nursing is endorsed by the American Holistic Nurses Association.

Objectives

At the completion of the program the graduate will be able to:

1. Provide advance, holistic nursing care to families in primary health care settings according to current standards of practice;
2. Analyze concepts, principles, and theories of advanced nursing knowledge with application to clinical problems and promotion of wellness;
3. Investigate clinical problems which test nursing theory and contribute to the expanding knowledge base of nursing science and specialty practice;
4. Function as a transformational leader and case manager to solve complex clinical and organizational problems in a variety of health care delivery systems;
5. Analyze holistic, ethical, legal, and health care policy issues that impact the nursing profession and the delivery of quality health care;

6. Participate in educational activities and service which positively influence the quality of life in the community;
7. Integrate the major curricular concepts into advanced nursing practice roles;
8. Promote individualized and culturally relevant health care services for families; and
9. Prepare for doctoral study.

Admission

Students in the graduate nursing program will meet the University admission, candidacy, and graduation requirements as listed in the Graduate catalog. Students should review the Graduate catalog for University requirements and policies. The sequence of nursing courses begins in the first semester of Summer or Fall Session.

Applicants who have completed graduate level nursing courses at other institution(s) need to have earned at least a grade of "B" in each course to be eligible for admission. Individuals who have previously earned grades of less than "B" in any graduate nursing course at another institution are not eligible for admission to the TSU MSN program.

Transfer of Graduate Level Nursing Courses

Graduate level nursing courses completed at other institutions, with grades of at least "B" and taken within the last 3 years will be evaluated on an individual basis.

Unconditional Admission

Requirements for unconditional admission are:

1. A cumulative GPA of 3.0 (on a 4.0 scale) in all required courses (general education and nursing) for the BSN degree OR in all the nursing courses required for the BSN degree. Graduate level courses are not counted in calculating the GPA,
2. Completion of courses in health assessment, statistics, and computer science. Applicants with deficiencies in any of these areas will be considered for conditional admission and must remove the deficiencies by the end of the first semester of enrollment,
3. Graduation from an NLNAC or CCNE accredited baccalaureate nursing program, and
4. A current Tennessee R.N. license.

Application Materials

Applicants should submit all the required application materials to the Graduate School by March 15th for summer admission and July 15th for fall admission:

1. Completed Graduate School applications with fee,
2. Three completed reference forms, one from a current clinical supervisor and one from a nursing faculty,
3. Official transcripts from all previous colleges,
4. Resume and copies of Tennessee RN license, certification, professional organization memberships, community service, continuing education, CPR and liability insurance,
5. Written statement of professional goals, upon completion of the MSN degree, maximum of 1 page, double spaced, typed.
6. Documentation of current professional nursing experience.

Interview

An interview with the Nursing Admission Committee will be scheduled after the completed admission packet is received from the Graduate School. Distance students will be interviewed on the telephone.

The interview is a required part of the admission criteria.

Conditional Admission

Students who do not meet the unconditional admission requirements may be considered for conditional admission if they can demonstrate graduate potential by other means. Students must have an undergraduate cumulative GPA of 2.50 to 2.99.

Students who are admitted conditionally must meet the following requirements to be considered for unconditional admission status:

Completion of 9 semester credit hours of graduate course work from the MSN curriculum as approved by advisor with an overall GPA of 3.0 or better.

PROCESS FOR CHANGE OF STATUS FROM CONDITIONAL TO UNCONDITIONAL ADMISSION

Students must meet all the requirements for unconditional admission before taking courses in the major.

Students who have completed the conditional admission requirements must apply for review by the Admission Committee and be approved for change of status.

SPECIAL REQUIREMENTS

Special requirements before entering the MSN clinical courses include current Health Care Provider-BLS status certification, professional liability insurance, and meeting OSHA and agency mandated health requirements.

Retention and Progression

To remain in good standing, a graduate student (degree or non-degree), must maintain an overall grade point average of 3.0 (B) or better on all graduate work attempted. In order to graduate, students must have a minimum 3.0 grade point average overall and on the program of study. When the cumulative grade point average falls below 3.0, the graduate student will be placed on academic probation. If the student does not achieve a 3.0 cumulative grade point average at the conclusion of one probationary semester, the Dean of the Graduate School and appropriate college/department/program officials will determine whether the student should be dismissed from the program or continued on probation. No student will be allowed more than two probationary semesters, whether consecutive or cumulative. At the end of a second probationary semester a student whose cumulative grade point average is still below 3.0 will be dismissed from the graduate nursing program. A student will be removed from probationary status upon attaining a cumulative 3.0 grade point average. Grades of D or F are not accepted for any graduate degree credit, but these grades will be computed in the GPA.

Academic disqualification from the graduate nursing major will occur when the student:

- Fails to maintain a 3.0 GPA in graduate school

- Falls to earn a grade of B (3.0) or better when repeating a course
- Willfully misrepresents patient data or clinical practice
- Willfully places any patient in physical or emotional jeopardy
- Is placed on probation by the Tennessee Board of Nursing
- Falls to disclose a felony conviction
- Falls to disclose disciplinary action or diversion by the Tennessee Board of Nursing
- Falls to complete all degree requirements within six (6) years of entering graduate nursing coursework

Re-admission

A student who earns a “C” in a nursing course may request permission to repeat the course. This request will be reviewed by the Admission Committee on an individual basis. This is a one time option. A student who earns a second “C” is not eligible to continue in the program.

Candidacy and Graduation

Students must meet all the University Graduate School and School of Nursing requirements for candidacy and graduation.

All students must successfully complete a comprehensive examination as required by the Graduate School. For thesis students, the examination will consist of an oral defense of the thesis. For non-thesis students, the written examination will include content from the entire program of study and may, at the discretion of the student’s committee, be followed by an oral examination.

Financial Assistance

Upon acceptance into the graduate program, students may apply for available stipends or financial aid. Full-time students (taking 9 hours each semester) may apply for teaching or research assistantships, and nurse traineeships.

Curricular Requirements

The goal of the master’s program is to prepare professional nurses at a level of knowledge, skills, and values to provide advanced, holistic comprehensive clinical nursing care to individuals and families with complex health care problems in primary health care settings.

The FNP curriculum provides a core of nursing and general knowledge as a foundation for advanced family health nursing practice which blends traditional clinical nurse specialist and family nurse practitioner roles. The Holistic Nursing concentration provides in depth study of complementary and alternative therapies, hospice nursing, holistic practice, ancient healing practices, oncology, and holistic specialization developed by student interest.

Students identify and work towards achieving their individual career goals. Clinical preceptors and specialized seminars assist the student to focus on the knowledge and skills needed for their area of advanced nursing practice. Graduates of the FNP program may be eligible to become certified as family nurse practitioners. Graduates of the Holistic Concentration are prepared to become certified as Advanced Holistic

Nurses—Board Certified through the American Holistic Nursing Credentialing Association.

Content is organized and sequenced to assist students to move from a general knowledge base to one that is more complex and specialized. The program consists of four (4) semesters plus one (1) ten (10) weeks Summer Session of full-time studies with 43 credits required for graduation or 45 credits for the Education track. Clinical practicum, field study, thesis or a scholarly project and comprehensive examination are part of the program. Students have the option of full-time or part-time study.

All students take the foundational courses first which provide holistic advanced knowledge, experiences, and competencies in nursing research, current and emerging theories, roles, ethical decision making, management of health care information, psychosocial, pathophysiological, pharmacotherapeutics, holistic assessment, and professional relationships.

Throughout the curriculum, faculty assist students to analyze nursing theorists’ approaches to clinical management, consumers of perspective health care, and the environment in which nurses practice. Nursing theory and research are placed before the clinical courses so students can integrate the knowledge into their advanced clinical practice. Faculty in the clinical practicums guide students in their testing and application of theory.

Courses in the Family Health, Holistic Nursing and Nursing Education concentrations assist students to apply clinical management processes, in progressively complex primary health care situations and educational settings. Courses include both theory and clinical experiences. Faculty assist students to build on their theoretical base and to pursue specific areas of interest with families in different settings.

Each credit hour of didactic teaching equals one 55 minute class period per week. One credit hour of clinical equals 5 clinical hours per week. The allocation of course credits to theory and clinical is determined by the faculty and is based on course content and objectives, and required learning activities. Students may elect to do a Research Project or Thesis as partial fulfillment for graduation.

Scholarly Project

Each student in the MSN program must conduct a scholarly project or theses (see p. 34 this catalog) as a partial fulfillment of the requirements for the completion of the degree. The initial step shall be the development of a proposal under the direction of an assigned faculty member. Faculty members who chair thesis or projects hold Graduate School status as approved by the Graduate Council. The proposal must be approved by the project advisor and the graduate faculty in the School of Nursing. Approval of the proposal by the graduate faculty shall constitute formal approval to pursue the scholarly project described therein.

The subject of the project must be an investigation of a topic of the current School of Nursing Research and Scholarly agenda. The project should produce useful conclusions and recommendations. A project director must be a member of the School of Nursing graduate faculty and involved in Nursing Research and Scholarly activities.

Scholarly Project students must enroll in NURS 5220 for two consecutive terms (6 hours). Detailed directions for the Scholarly Project may be obtained from one’s advisor.

PROGRAM OF STUDY

DEGREE: MASTERS OF SCIENCE

MAJOR: NURSING

CONCENTRATIONS:

**Nursing Education
Family Nurse Practitioner
Holistic**

The masters program offered by the School of Nursing includes three concentrations: Nursing Education, Family Nurse Practitioner, and Holistic Nursing. These programs are designed to prepare advance practice nurses for education and practice. Prior graduate work and the individual student's interest and career goals will be considered in planning the program of study for each candidate.

PROGRAM OF STUDY

Core Curriculum Required Courses (12-15 hours)

NURS 5000	Nursing Theory	3
NURS 5020	Research in Nursing Practice	3
NURS 5040	Role Development: Theory and Practice	3
NURS 5070*	Health Policy for Advanced Practice Nurses	3
NURS 5210	Pathophysiology	3

*Not required for Nursing Education Concentration

CONCENTRATION I—(16 hours)—Family Nurse Practitioner

NURS 5100	Family Health and Nursing Assessment Across the Life Cycle	4
NURS 5280	Pharmacotherapeutics	3
NURS 5120	Advanced Family Health Nursing I	4
NURS 5140	Advanced Family Health Nursing II	5

Certificate: Family Nurse Practitioner

The Graduate Certificate in Family Nurse Practice is a 19 credit hour program offered for nurses who hold a Master of Science in Nursing degree from a nationally accredited program and are interested in continuing study in Family Practice. Required courses for the certificate include Pharmacology, Pathophysiology, Assessment, Advanced Family Health Nursing I and Advanced Family Health Nursing II. Graduates will be prepared to write the FNP certification examination.

CONCENTRATION II: (20 hours)—Nursing Education

NURS 5230	Nursing Education I Organizational Operations— The Faculty Role	3
NURS 5250	Nursing Education II The Education Process	4
NURS 5270	Nursing Education III Curriculum Development and Implementation	5

Clinical Option Courses—Choose One Specialty Group

NURS 5290	Psychiatric Nursing I	4
NURS 5300	Psychiatric Nursing II	4
Or		
NURS 5320	Adult Health Nursing I	4
NURS 5340	Adult Health Nursing II	4
Or		
NURS 5360	Women's Health Nursing	4
NURS 5380	Pediatric Health Nursing	4

Certificate: Nursing Education

Nurses who hold a Master of Science in Nursing degree from a nationally accredited program and are interested in continuing study in Nursing Education may be eligible to enter post graduate studies. The three pre-requisite courses required for advanced practice nursing—Advanced Assessment, Advanced Pathophysiology, and Advanced Pharmacology—will be required for completion of the certificate. Graduation with a post-graduate certificate will require 20 hours of the Nursing Education concentration courses including all associated clinical hours.

CONCENTRATION III: (18 hours)—Holistic Nursing

NURS 5080	Holistic Nursing	3
NURS 5170	Holistic Nursing Interventions	3
NURS 5180	Advanced Holistic Nursing Practicum I	4
NURS 5190	Advanced Holistic Nursing Practicum II	4

Certificate: Holistic Nursing

Nurses who hold a Master of Science in Nursing from a nationally accredited program and are interested in continuing study in Holistic Nursing may be eligible to enter post graduate studies. Three pre-requisite courses are required and include Advanced Assessment, Advanced Pharmacology, and Advanced Pathophysiology. Fourteen (14) additional hours in Holistic Nursing will complete the requirements for the post-graduate certificate.

Electives

Six hours of elective course work is required for the FNP concentration and 3 hours for the Holistic Concentration. Students may select graduate courses they determine will meet their educational goals and complement the required course offerings. Approval of the nursing advisor is required. A list of graduate level courses in other departments that MSN students may select, without prerequisites, is available from the faculty advisor.

Thesis OR Project (6 hours)

NURS 5200	Thesis Writing	6
OR		
NURS 5220	Scholarly Project	6

Total of 43 credits for FNP
Total of 45 credits for Holistic
Total of 45 credits for Nursing Education

COURSE DESCRIPTIONS

Core Required Courses

NURS 5000. NURSING THEORY. (3 CREDITS) This 3 credit course provides students with opportunities to examine the historical evolution of nursing science and to critically analyze nursing's metaparadigm and selected philosophies, theories, and conceptual models. Students examine the components intrinsic to theory development. Through oral and written presentations, students demonstrate their ability to compare and contrast relationships between personal philosophy, theory, research, nursing education, and advanced nursing practice. Three lecture/seminar hours each week. No prerequisites.

NURS 5020. RESEARCH IN NURSING PRACTICE. (3 CREDITS) This 3 credit course provides students with knowledge and skills in scientific inquiry in a practice discipline. Opportunities to develop the ability to validate and extend research findings are provided. An in-depth analysis of selected research methods, designs, and data analysis are discussed with an emphasis on their relationship to planning, implementing, and evaluating nursing and health care. Three lecture/seminar hours each week. Prerequisites: NURS 5000.

NURS 5040. ROLE DEVELOPMENT: THEORY AND PRACTICE (3 CREDITS) This 3 credit course provides students with an in-depth understanding of the legal, historical, political, social, and ethical aspects of advanced nursing practice. Selected conflict management, decision making, technological, marketing, and entrepreneur theories and principles applicable to advanced clinical nursing practice are analyzed. Three lecture/seminar hours each week. No prerequisites.

NURS 5070. HEALTH POLICY FOR ADVANCED PRACTICE NURSES. (3 CREDITS) This course focuses on analysis of healthcare systems in the United States including public policy making and processes, health care disparities, infrastructure, quality of care and future anticipated challenges. Students will explore public and private health care systems and processes to improve health care. Global health care issues are integrated enhancing understanding of health care issues in the United States.

NURS 5100. FAMILY HEALTH AND NURSING ASSESSMENT ACROSS THE LIFE CYCLE. (4 CREDITS) This course provides students with the theories and concepts which are foundational to the understanding of the complex health and nursing problems of families. Family theories, development, systems, and stress factors are emphasized. The principles and techniques of data collection for advanced health assessment, from neonate to the mature adult, are presented. The course content includes principles of advanced assessment, health promotion, disease prevention, diagnosis and management of common health problems in families. The opportunity to practice skills in laboratory and clinical settings is included. Four (4) lecture/seminar hours per week and 80 clinical hours. Prerequisites: NURS 5000, 5040.

NURS 5210. PATHOPHYSIOLOGY. (3 CREDITS) This three credit course explores normal and abnormal physiological processes that serve as a foundation for advanced practice nurses. The course is analysis of complex interrelationships and interdependence of organ systems in health and disease. Selected physiologic and pathophysiologic processes are considered at biochemical, cellular, organ, and systems levels. The emphasis is on interrelationships among physiologic processes throughout the body.

NURS 5280. PHARMACOTHERAPEUTICS. (3 CREDITS) This course provides a foundation in the drug therapies used in the treatment of selected medical conditions commonly encountered by advanced nurse practitioners. Emphasis is on the decision-making process used to prescribe and monitor drug therapy appropriate to the client situation. This decision-making process includes necessary variables such as: age, contraindications, warnings, drug interactions, and current research findings in order to make an intelligent drug selection for clients with specific diagnosis. The principles of safe use of the prescribed drugs and dissemination of information to the patient are included. Two lecture/seminar hours each week. Prerequisites: NURS 5000, 5040.

Major Concentrations: Family Nurse Practice

NURS 5120. ADVANCED FAMILY HEALTH NURSING I. (4 CREDITS) This course explores the application of theory and research to the prevention and treatment of common family health and nursing problems. The

course includes the principles of health promotion, disease prevention, assessment and management of common health problems in children, adolescents, and adults. The practicum provides the opportunity to gain skill and confidence in identifying and resolving client problems using a variety of treatment modalities and resources. Case management and community referral skills are developed. The philosophical and ethical basis of nursing practice, which promotes excellence in care, is emphasized. Four (4) lecture/seminar hours per week and 280 clinical hours each semester are required for certification. Prerequisites: NURS 5000, 5040, 5100.

NURS 5140. ADVANCED FAMILY HEALTH NURSING II. (5 CREDITS) This course further implements the role of the advanced practice nurse in providing and managing care for families with common health and nursing problems. The course includes the principles of health promotion, disease prevention, assessment and management of common health problems in adults. The practicum provides the opportunity to gain skill and confidence in identifying and resolving client problems using a variety of treatment modalities and resources. Case management and community referral skills are developed. The philosophical and ethical basis of nursing practice, which promotes excellence in care, is emphasized. Four lecture/seminar hours per week and 280 clinical hours each semester are required for certification. Prerequisites: NURS 5000, 5040, 5100, 5120.

Holistic Nursing

NURS 5080. HOLISTIC NURSING PERSPECTIVE. (3 CREDITS) This 3 credit course provides students with the foundation for delivering holistic nursing care to families. The principles of holistic care which include psychosocial concepts and their application in diverse social and cultural settings are presented. Current research and its application to advanced nursing practice is explored. Three lecture/seminar hours each week. 10 clinical hours for Holistic Nursing Concentration students. Prerequisites: NURS 5000, 5040.

NURS 5170. HOLISTIC NURSING INTERVENTIONS. (3 CREDITS) This three credit course provides students an introduction to complementary healing health practices used in advanced practice holistic nursing. Scientific and research basis for complementary therapies are explored. 70 clinical hours. Prerequisites: NURS 5000, 5020, 5040, 5080, 5100, 5280, 5210.

NURS 5180. ADVANCED HOLISTIC NURSING PRACTICUM I. (4 CREDITS) This four credit course provides students with the opportunity to demonstrate self-integration of holistic nursing concepts into practice and to explore potential opportunities for application of holistic nursing into health care settings. 210 clinical hours. Prerequisites: NURS 5000, 5020, 5040, 5080, 5100, 5280, 5170

NURS 5190. ADVANCED HOLISTIC NURSING PRACTICUM II. (4 CREDITS) This four credit course provides students further opportunity to demonstrate integration of holistic nursing concepts in practice design and theory-based practice and to demonstrate leadership in addressing issues important to holistic nursing. 210 clinical hours. Prerequisites: NURS 5000, 5020, 5040, 5080, 5100, 5280, 5170, 5180.

Nursing Education

NURS 5230. ORGANIZATIONAL OPERATIONS: THE FACULTY ROLE (3 CREDITS) This three credit course provides the learner with an overview of the teaching role. Responsibilities related to student advisement, university operation, and the daily activities of the educator are included. The learner's experience will be broadened in viewing faculty life, including the recurring duties required of the novice educator.

NURS 5250. THE EDUCATION PROCESS (4 CREDITS) This four credit course explores the detailed process of teaching and learning. Elements significant in developing teaching materials and identification of learning needs and methods of motivating students to excel are taught. Further information is given related to testing and measurement. The course assists the new faculty member to prepare test items that are related to instructional content and objectives and to measure the student's knowledge retention. Evaluation of the completed test for quality of construction will be stressed.

NURS 5270. CURRICULUM DEVELOPMENT AND IMPLEMENTATION (5 CREDITS) This five credit course is designed to provide the graduate student with opportunities for application of previous content. Instructional design principles are applied to clinical, laboratory, and classroom teaching. Curriculum development provides the learner with experience in

placement of courses, leveling course objectives, and linking the philosophy and mission statements of the parent institution with courses for the entire program. A practicum experience is designed to give a reality context for applying the concepts of the teaching role. Students synthesize a conceptual foundation for developing effective learning activities using a case study approach to provide realistic problem solving opportunities. Traditional and innovative learning environments are analyzed in relationship to the advanced role of the nurse. Issues and research findings pertinent to teaching are addressed. Prerequisites: 5230, 5250.

NURS 5320. ADULT HEALTH NURSING I (4 CREDITS) This four credit course focuses on promoting and maintaining the wellness of adults through theory and research-based interventions and management. Families are considered when assessing adults and their health status. Management of commonly encountered health deviations in the chronically ill adult population, protocols for treatment decisions, referrals and application of advanced nursing practice skills are covered in the course. Management of primary, secondary, and tertiary health care needs of adults is emphasized. Synthesis and evaluation of various educational theoretical concepts, research findings, and clinical protocols are taught. Prerequisites: 5230.

NURS 5340. ADULT HEALTH NURSING II (4 CREDITS) This four credit course involves the practice base for advanced clinical nursing with acutely ill clients. Acute care nursing requires a thorough understanding of the relatedness of the body systems, including the reciprocal relationship between the physiologic, psychological, social and spiritual dimensions of the person, as well as an understanding of the dynamic nature of the life process. With advances in biomedical technology, diagnostic procedures, and clinical therapeutics, patients are treated in complex clinical settings. The course prepares competent nurses by requiring a broad knowledge base, expert clinical and decision-making skills, and a commitment to nursing's ethical and professional values. Prerequisites: 5320, 5230.

NURS 5290. PSYCHIATRIC NURSING I (4 CREDITS) The purpose of this four credit course is to prepare the graduate student to assess, diagnose, and manage the mental health care needs of culturally diverse populations across the lifespan. The focus is on advanced practice nursing with individuals and families in a variety of health care settings. Emphasis is placed on wellness and the pathophysiology and epidemiology underlying acute and chronic psychiatric/mental health problems. Prerequisites: 5230.

NURS 5300. PSYCHIATRIC NURSING II (4 CREDITS) This four credit course continues the content begun in the first psychiatric nursing course with a focus on the clinical instruction of nursing students. The purpose of this course is to provide the graduate nursing student an in depth study of psychiatric/mental health nursing care management of adults and their families within the framework of advanced practice nursing. The focus is on selected acute and chronic complex psychiatric/mental health care problems of a culturally diverse population. Prerequisites: 5230, 5320.

NURS 5360. WOMEN'S HEALTH NURSING (4 CREDITS) This four credit course addresses health promotion for women and the diagnosis and management of common gynecologic, and pre-natal problems. Content includes the application of selected theories and principles from the physical and behavioral sciences central to primary care of women. Women's health issues, such as reproduction, contraception, sexuality and fertility will be included. Clinical practice focuses on the physiologic factors of disease processes. Prerequisites: 5230.

NURS 5380. PEDIATRIC HEALTH NURSING (4 CREDITS) This four credit course addresses diagnosis and management of common acute

and chronic health problems of children. The focus is on health promotion and health maintenance of children, newborns through adolescence, within the context of families, schools and communities. Students will utilize research and theories from nursing and related disciplines and the assessing, planning, implementing and evaluating of care for the child. Prerequisites: 5230, 5320.

Other

NURS 5200. THESIS WRITING. (6 CREDITS) These courses are designed to provide the student with the opportunity to develop and research an area of special interest under the direct supervision of an approved graduate faculty person. Student is required to complete 6 credits. Prerequisites: NURS 5000, 5020, 5040, 5100, 5120, 5140, 5280.

NURS 5220. PROJECT WRITING. (6 CREDITS) These courses provide the student with the opportunity to develop a project related to the area of concentration, under the supervision of a faculty member. Student is required to complete 6 credits. Prerequisites: NURS 5000, 5020, 5040, 5100, 5120, 5140, 5280.

Electives

Graduate courses in other departments and/or Nursing Special Topics (NURS 5240/5260) 3 credits

NURS 5240 or 5260. Selected Topics (3 credits) This 3 credit course provides the student with the opportunity to pursue focused studies in areas not covered in the regular course offerings. Prerequisites: NURS 5000, 5020, 5040, 5100, 5120, 5140, 5280.

Graduate Faculty

Carol Bompert, Associate Professor

B.S.N., 1984, Tennessee State University; M.S.N., 1996, Tennessee State University; Ed.D. Tennessee State University

Barbara Buchanan Covington, Professor

B.S.N., 1974, University of Tennessee Memphis; FNP, 1978, Meharry Medical College; M.S.N., 1984, University of Tennessee Memphis; Ed.D., 1998, Tennessee State University

Gary Linn, Professor

B.A. History, 1968, Long Island University; M.S. Ibero-American Studies, 1972, University of Wisconsin-Madison; M.S. Sociology, 1974, University of Wisconsin-Madison; Ph.D. Sociology, 1983, University of Wisconsin-Madison

Jane Norman, Professor

A.S.N., 1970, University of Tennessee; B.S. Sociology and English, 1972, University of Tennessee; M.S.N., 1976, Vanderbilt University; Ph.D., 1982, Peabody College of Vanderbilt University, Certified as Nurse Educator, 2007.

Verla Vaughan, Professor

B.A., 1972, Tennessee State University; M.S.N., 1997, Vanderbilt University; Ph.D. Texas Woman's University.

THE AVON WILLIAMS CAMPUS CENTER FOR EXTENDED EDUCATION AND PUBLIC SERVICE

Dr. Evelyn E. Nettles, Associate Vice President for Academic Affairs
Suite 339, Avon Williams Campus
(615) 963-7003

Avon Williams Campus Administration:

Student Support Services for Adult and Distance Learners, *The One-Stop-Shop*

Wilson Lee, Jr. Director

Office of Off-Campus Programs

Sharon D. Peters, Director

Office of Distance Education and Multimedia Services

Cheryl Seay, Director

Office of Continuing Education

Vacant, Director

The Avon Williams Campus (AWC) of Tennessee State University is located at 330 10th Avenue North, in the heart of downtown Nashville. This facility, which serves as the hub for the University's night, weekend, and distance education offerings, was named for the noted Civil Rights attorney Avon Nyanza Williams Jr. who brought litigation that sought to end segregation in public higher education in the state of Tennessee. At the Williams Campus, traditional and nontraditional students are afforded the opportunity to earn a degree during the day, in the evening, on weekends, and via distance education delivery systems. Both undergraduate and graduate degree programs are offered at this facility. The Williams Campus houses the offices of Continuing Education, Distance Education, Off-Campus Programs and Student Support Services for Adult and Distance Learners (*The One-Stop-Shop*). Through academic programming and reliable and efficient student support services, the University reaches beyond its walls to serve citizens throughout the state and around the globe.

Center for Extended Education and Public Service

The Center for Extended Education and Public Service is the administrative unit at AWC responsible for coordinating academic and community service outreach that advances TSU's mission of instruction, research, and service. It is also the administrative unit responsible for the operations of the Avon Williams Campus. Programs offered through Extended Education are designed to meet the professional, career development, personal and civic awareness needs of persons in the University's service area, and among select client groups throughout the state and the nation. When specific needs are identified, instruction or assistance is provided on and off-campus at times convenient to the learner or the sponsoring organization. All services are designed to facilitate individual adult participation, learning, achievement and/or organizational development. Information about programs offered through the Center is detailed below.

Student Support Services for Adult and Distance Learners *The One-Stop-Shop*

The goal of the Office of Student Support Services for Adult and Distance Learners or *The One-Stop-Shop* is to provide a single point of access for both undergraduate and graduate students seeking enrollment and other support services. The primary objective of this unit is to remove barriers, provide accurate and timely information, and anticipate the needs of nontraditional students. This unit administers the *Geier* Nontraditional Student Scholarship and provides recruitment, admissions, and financial aid services to all nontraditional students. Nontraditional students have access to the Counseling Center, Career Placement, Disabled Student Services, Graduate and Professional Opportunities, and Minority and International Affairs through *The One-Stop-Shop*. Academic advisement for students enrolled in the Regents Online Degree Program is also located within this unit. *The One-Stop-Shop* is committed to providing quality service to all students. Contact the Office of Student Support Services at (615) 963-7003 or by email at AWC_StudentSupport@tnstate.edu for more information.

Off-Campus Programming at TSU

The purpose of off-campus programming is to extend educational opportunities to the entire Middle Tennessee community. This unit provides greater access to TSU courses/programs by extending the "classroom" to areas where students live and work. Personnel within this unit provide support services to off-campus students. Sites are located at community colleges and high schools throughout the Middle Tennessee area. For a current listing of off-campus sites, visit www.tnstate.edu or call 615-963-7003.

Distance Education and Multimedia Services

Distance Education

Distance education at Tennessee State University allows the Institution to extend its resources in the areas of instruction and service to citizens within the state of Tennessee and to persons around the world. Classes are offered through various technological delivery systems including interactive video instruction, video independent study, TSU online, and the Regents Online Degree Program. All distance education classes are planned and conducted in accordance with the academic requirements and regulations of participating academic colleges and schools. Described below are the various types of distance education courses offered at TSU.

- Video Independent Study Program (VISP)—Video Independent Study Program offers a flexible alternative to

traditional courses. VISP courses require the student to independently review and study pre-recorded videos. Students also read textbook assignments and complete projects, papers, and examinations. A mandatory orientation session on the first day of class is required. Other sessions are scheduled throughout the semester for content review and examinations. Students are required to attend all scheduled class meetings. On the orientation session date, all enrolled students are loaned a set of video tapes from the Avon Williams Campus Media Center. These video sets must be returned to the Center by the specified date at the end of the semester. VISP courses are designated in the course schedule as section 97.

- **Interactive Video Courses**—Interactive video courses allow TSU to broadcast live instruction to enrolled students at remote sites. These sites include other colleges, universities, and school systems. The video conferencing classrooms allow the instructor to communicate in real time via both audio and video. Interactive video courses are designated in the course schedule as section 97A.
- **TSU Online Program**—TSU Online courses are delivered via WebCT, the University's online course management system. Students are required to read assignments, participate in discussion groups, and communicate with professors and other students by email. In addition, students are responsible for reading textbook assignments, completing papers and projects, and taking examinations. As the course is delivered completely online, students must have proficient computer skills and access to a computer with the following minimum requirements:
 1. Administrative rights to download software, change computer settings, etc.
 2. A dependable internet service provider (ISP).

Students are required to attend a face-to-face orientation or complete an orientation module online prior to attending the course. TSU online courses are designated in the course schedule as sections 98.

- **Regents Online Degree Program (RODP)**—Tennessee State University has joined with the other Tennessee Board of Regents (TBR) institutions in offering the Regents Online Degree Programs. The online degree program currently consists of two bachelor degrees: Bachelor of Professional Studies with a concentration in Information Technology or Organizational Leadership and Bachelor of Interdisciplinary Studies. RODP also offers the Masters of Nursing, and the Masters of Education with Alternative C Licensure in special education, English as a second language, math, biology and chemistry. Teacher Education Add-on Endorsements Courses are available as well. Courses offered through these programs are delivered completely online although some courses may require proctored tests.

RODP courses are designed to meet the needs of the adult student who cannot attend school because of family, work, and/or other obligations. Students interested in pursuing one of these degrees must apply to TSU and meet the general admissions requirements. Upon acceptance to TSU, the student must meet with the RODP coordinator in person or by telephone to plan a program of study.

RODP courses are designated as section R50. RODP course fees are charged on a per hour basis and are in addition to standard course fees. While these courses are designed for students majoring in the degrees listed above, all TSU students may enroll in RODP courses as approved by their faculty advisor. For more information, visit the RODP website at http://www.tnstate.edu/eeps/rodp_info.htm.

Multimedia Services

The Office of Distance Education also comprises the Multimedia Services unit. The goal of Multimedia Services is to enhance the teaching and learning process in the classroom, distance education and continuing education programs by providing leadership, support and a broad range of services to Tennessee State University faculty, staff and students. This goal enables the University to incorporate existing and emerging technologies in the learning environment. The unit (1) provides training in the use of educational technology; (2) assists faculty develop, implement and assess the effectiveness of advanced research-based teaching and learning methodologies, including multimedia learning; and (3) increases the use of technologies in support of technology-enhanced courses, online courses and other distance learning environments. For more information, contact the Office of Distance Education and Multimedia Services at (615) 963-7003.

Continuing Education

Non-credit courses are coordinated through the Office of Continuing Education. The unit offers courses/activities throughout the year both on and off-campus in response to special client needs and for the greater community. The instruction is supported by regular and part-time faculty and it is designed to meet the special needs of both the vocational and avocational learners. All instruction is based upon participatory evaluation rendered by those who are enrolled. Most instructional activities are offered for enrollment on an individual fee basis, but selected activities are planned with client groups and they are delivered under special contracts.

Continuing Education Units (CEU) are awarded to participants of selected instructional activities that are approved within the published guidelines. Institutional records of such learning are maintained by the Office of Continuing Education and are available upon written request by the student.

- **Conferences, Courses, and Seminars**—Conferences provide an opportunity for participants, members of the University community, and highly qualified resource persons to share information and explore new ideas that will improve job performance or complement their academic interests. These conferences and institutes are tailored to reflect the needs of the requesting client group. The format used in short workshops and seminars vary with the type of program, but they are always designed to meet the expressed needs of groups served.
- **Non-Credit Courses**—Courses are offered to meet specific needs expressed by the public and by local business and industry. These courses and others not listed may be provided upon request on a contractual basis. The following is a selected listing of non-credit courses offered by the University.

RESEARCH AND SPONSORED PROGRAMS

Marcus W. Shute, P.E. Ph.D. Vice President
Maria Thompson, Ph.D., Assoc. Vice President, Research Admin.
Research and Sponsored Programs Building
(615) 963-7631
(615) 963-5063 (FAX)
www.tnstate.edu/research

Research and Sponsored Programs (RSP) provides leadership, information and services to encourage faculty, research associates, post doctoral fellows, and staff to engage in research and creative activity. The University receives awards from federal agencies and private foundations for research, training and technical assistance. RSP seeks to provide the best environment for study and research through a creative association of faculty and students as a community of scholars in expanding the boundaries of science, education, and technology. It serves as a liaison between funding agencies, principal investigators (PIs) and administrative units of the University. The RSP staff provides the following services:

- Locates potential funding sources
- Coordinates compliance on human subjects, animal care, and safety involving chemical and biological hazards with university, state and federal regulations
- Coordinates research initiatives, partnerships, collaborations and cooperative agreements
- Guides faculty and staff through the proposal development and grant application process
- Routes proposals through proper administrative channels for approvals and endorsements
- Maintains university award files
- Assists in matters related to intellectual property patents, copyrights and publication agreements
- Monitors progress and execution of funded projects
- Provides education and training in research and grant administration, compliance, research ethics, and other related areas
- Tracks equipment purchased under federal grants and contracts

Strengthening TSU's research infrastructure is a major priority of RSP. The level of creative thinking and the compilation of sponsored research projects are reflections of the competitive grantsmanship of the faculty and staff at TSU. The University displays a broad spectrum of sponsored research programs including: basic and applied research, along with product and service deliverables. The research programs range from single

PI projects at the local level to major international team collaborative.

Tennessee State University displays a broad spectrum of sponsored research projects, ranging from basic to applied, and from single PI grants to major interdisciplinary collaborations. TSU has averaged approximately \$35M annually in research and sponsored program awards in recent years. It has over 100,000 sq. ft. of floor space designated for scientific and technological research. The first phase (62,000 sq. ft.) of a new, state of the art research facility was completed in 2007, and houses core laboratories for nanoscience and biotechnology research. Current projects include research in astronomy, computer modeling and simulations, biomedical applications of signal processing, hazardous waste management, neural networks and fuzzy logic, robotics and machine vision, AI/expert systems, computational science, gene _expression, plant genetics, animal science, agricultural biotechnology, health research, and nanoscience. TSU also conducts research in software engineering, advanced manufacturing and packaging, materials processing, drug-binding to DNA, topology, large scale control and distributed computing systems, astrophysics and astrobiology, forestry, organic synthesis, transportation planning and modeling, and several other fields of study. At Tennessee State, we believe research is essential to excellence in education and enhances the learning experience of our students. In addition, the faculty is involved in scholarly activity in the arts and has a state of the art performing arts center that is an integral part of ensuring a well-rounded educational experience for students at TSU and the community.

Research at Tennessee State University utilizes the diverse skills and expertise of our researchers, faculty, staff, and students to make significant and sustained contributions to the knowledge of humankind through new discoveries that have positive impact on our community, our nation, and the world in which we live.

At Tennessee State, we believe research is essential to excellence in education and enhances the learning experience of our students.

Center of Excellence Information Systems Engineering and Management

Michael R. Busby, Ph.D., PE
Director
Campus Box 9501
(615) 277-1600, (615) 277-1614 (FAX)

MISSION STATEMENT

The mission of the Center of Excellence (COE) is to provide an environment conducive to and facilities in support of interdisciplinary research in selected areas of information systems. Since 1987 the Center has produced more than 900 publications of which over 700 have appeared in refereed journals.

INTRODUCTION

The COE at Tennessee State University is a multidisciplinary research unit founded in 1986 as part of the state-wide Centers of Excellence program whose mission is to expand the research base of the state of Tennessee. The Center consists of researchers, support staff, and students in the areas of astronomy, advanced control systems and systems identification, applied mathematics, and management information systems. Graduate and undergraduate students are drawn from the computer science, physics, mathematics, and engineering curricula. The Center is located on the third floor of Holland Hall.

FUNDING SOURCES

Original funding for the COE came from the State of Tennessee Centers of Excellence Program with additional matching funds from Tennessee State University. Due to patterns of recent external funding, TSU's Center of Excellence has become a Center of research centers. The National Aeronautics and Space Administration (NASA) funds research in astrophysics and control systems through the Center for Automated Space Science (CASS). The National Science Foundation (NSF) funds additional research in control systems, applied mathematics, complex fluid flows, and astrophysics. Finally, NASA funds education outreach programs at TSU through the Tennessee Space Grant Consortium (TSGC). Since 1987 the Center has generated over \$35 million in externally funded research.

MAJOR RESEARCH AREAS

Astronomy with Automated Telescopes—Center astronomers are developing the capabilities to make a wide variety of astronomical observations with automatic telescopes in order to conduct long-term research projects that would be too difficult or too expensive to accomplish without the benefits of

automation. TSU astronomers currently operate seven 10-inch to 32-inch automatic photoelectric telescopes (APTs) that make highly precise measurements of stellar brightness changes. Additionally, there are a 24-inch automatic imaging telescope (AIT) and an 81-inch automatic spectroscopic telescope (AST). All telescopes are located in the Patagonia Mountains of southern Arizona where they are maintained for TSU by Fairborn Observatory, a non-profit scientific research organization. Astronomers in the Center use the telescopes to measure brightness changes in sun-like stars, search for planets around other stars, study magnetic activity in cool stars, measure the fundamental properties of double and multiple stars, and a variety of other projects.

Advanced Control Systems—Center researchers are studying fundamental issues of controlling modern systems that are increasingly complex. Current research projects include developing new control design methods to deal with plant and controller sensitivity, robust stability, and robust performance. The areas of research include robust and fixed structure controller design, system identification, and adaptive control using artificial neural networks. The researchers are also contributing to research in robust control and modeling of ultra-light (ULSS) space structures, satellite control, and scheduling of autonomous telescopes. Researchers are developing techniques to model systems with uncertainties, and theories to analyze the performance and behavior of such systems. New and efficient control design methodologies that ensure stability and performance of the systems under various changing environments are under study.

Applied Mathematics—Center applied mathematicians are developing the tools to study the fundamental characteristics of large-scale complex dynamic systems. Our current research projects include investigation of dynamic reliability, controllability, estimation and stability of complex dynamic systems under both structural and environmental randomly varying perturbations. In this context, we are developing (1) stochastic approximation procedures under various modes of convergence, (2) stochastic stability via Lyapunov's techniques and comparison results, and (3) implicit and explicit numerical schemes and algorithms. Our investigation includes real world problems from multi-species communities, multiple market systems, image processing problems, dynamics of fluids and gas flows, immigration and emigration, and complex environmental systems.

CENTER OF EXCELLENCE FOR LEARNING SCIENCES

Rick Vanosdall, Ed.D.
Interim Director
Campus Box 9500
(615) 277-1651
(615) 277-1654 (FAX)
www.tnstate.edu/learningsciences

The Tennessee Board of Regents' Center of Excellence for Learning Sciences (formerly Research and Policy on Basic Skills) at Tennessee State University is one of Tennessee's accomplished Centers of Excellence. Centers were established by action of the Tennessee General Assembly in 1984 to expand research and contribute to the overall economic and community development base of the state. The mission of the Center of Excellence for Learning Sciences is to conduct multidisciplinary research and demonstrations concerning the practices, policies and programs of institutions and communities that influence the educational, social, physical, and psychological well-being of children and families. The Center produces and disseminates research and information to support the formation of public policy and the programmatic decisions of schools, agencies and communities in Tennessee and in the nation.

Center goals are:

To provide an environment and facilities to conduct significant research studies in the learning sciences.

To demonstrate research capability which denotes the Center as accomplished among peer institutions and in the broader research community.

To disseminate research that has an impact on policies, programs and practices which can improve opportunities for children and families to succeed and strengthen community infrastructures.

The Center of Excellence for Learning Sciences continues to expand its research agenda to achieve these goals as a part of Tennessee State University's commitment to excellence.

Academic Achievement and Teacher Development in Science

The Academic Achievement and Teacher Development in Science (AATDS) is an education research project funded by the National Science Foundation. This project is conducting scientific education research on the effects of "hands-on" science curriculum and pedagogical training for teachers on student learning as measured on NCLB accountability measures.

Center for Education Funding Analysis

The Center for Education Funding Analysis is a collaboration between the College of Agriculture and the Center of Excellence for Learning Sciences. The Center provides an opportunity

for communities and decision makers to interact and consult with scientists to develop strategies for addressing critical issues in the economics of education.

Bureau of Evaluation and Research Services (BERS)

The Bureau of Evaluation and Research Services (BERS) administers the Center's projects and programs which provide training, research demonstration projects, and/or research services to education and human service agencies. The units currently located in the Bureau are described as follows:

Tennessee CAREs Early Head Start Program

The Tennessee Comprehensive Area Resource Efforts (CAREs) unit administers one of the original 68 national Early Head Start research and demonstration programs. The Early Head Start Program is funded by the Administration for Children, Youth, and Families and is part of the national laboratory for research on best practices for infant-toddler and family programs.

Tennessee Early Childhood Training Alliance (TECTA) Program Management

The Center of Excellence for Learning Sciences serves as the statewide managing agent and provides research and development support to nine regional TECTA offices located in Tennessee Board of Regents (TBR) colleges and universities.

Tennessee Early Childhood Training Alliance (TECTA) Tennessee State University (TSU) Site

The TECTA TSU Site supports a system of certificates, credentials and degrees for early childhood education teachers and administrators.

Davidson County Child Care Resource and Referral (CCR&R)

The Davidson County CCR&R provides training and technical assistance to child care providers within Davidson County to improve the quality of child care for all children.

Tennessee Child Care Provider Training (TN-CCPT)

TN-CCPT is a specialized training component of the Child Care Resource and Referral (CCR&R) network delivered through the Tennessee Child Care Provider Training (TN-CCPT) system

Tennessee State University’s Partnership for Academic Training with Head Start (TSU-PATHS)

TSU-PATHS partnership utilizes capabilities of Tennessee State University (HBCU) to improve the quality and long-term effectiveness of Head Start by developing models of academic training for Head Start staff.

Child Development Associate Training Program

The Child Development Associate (CDA) is a national credentialing training program to improve the quality of performance of individual early childhood staff members.

Social Services Competency Based Training Program

The Social Services Competency Based Training Program (SSCBT) is a national training program for the development of generic competencies through the improvement of job practice skills of human service workers.



University Administration

OFFICE OF THE PRESIDENT

PresidentMelvin N. Johnson
 B.S., 1968, North Carolina A&T University; M.A., 1974, Ball State University; MBA, 1979, Indiana University; DBA, 1983, Indiana University

Chief of Staff and University Counsel.....Lisa Karen Atkins
 B.A., University of Notre Dame; J.D., University of Tennessee-Knoxville

Director of Athletics.....Teresa Lawrence-Phillips
 B.S., 1980; M.S., 1999, Tennessee State University

Director, Equity, Diversity, and ComplianceSandra Keith
 B.S., 1991 Vanderbilt University; J.D., 1994, University of Florida

Director of Internal AuditNorman Michael Batson
 B.S., 1986 Auburn University.

ACADEMIC AFFAIRS

Provost and Executive Vice President.....Robert L. Hampton

Associate Vice President for Academic AffairsKen J. Looney
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Associate Vice President for Academic AffairsPatricia Crook

Dean of the Graduate SchoolHelen Reinhold Barrett
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Dean of the College of Arts and SciencesWilliam D. Lawson
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 B.S., 1990, University of the Philippines; M.A., 1995, Trevecca Nazarene University; Ed.D., 2002, Trevecca Nazarene University; D.P.T., 2005, Rocky Mountain University of Health Professions

Dean of the School of Agriculture and Consumer SciencesConstantine Fenderson (Interim)

Dean of The School of NursingBernadine Fleming

Dean of Admissions and Records.....John Cade
 B.S., 1976, South Carolina State College; M.Ed., 1977, South Carolina State College; M.Ed., 1984, Bowie State University; Ed.D., 1998, Tennessee State University.

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Director of Institute of Government.....Ann-Marie Rizzo
 B.A., 1969, Ithaca College; M.A., 1971, Ph.D., 1974, Syracuse University.

Director of Aerospace StudiesCol. Albert Hill Jr.
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Director of Academic Enrichment, Advisement, and OrientationMonetha R. Reaves
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Director of Honors Program.....Sandra W. Holt
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Director of TestingS. Yancey Padgett
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- Director of Faculty Support CenterG. Pamela Burch-Sims
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- Director of Cooperative Extension ProgramClyde Chesney
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- Director Title III Program.....Rosemary Jefferies
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- Director of International Student Affairs.....Shirley Wingfield
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- Director of Minority Student Affairs.....Mark Gunter
B.S., 1991, Austin Peay State University; M.A., 1993, Austin Peay State University.
- Director, First Year Students Program.....Regina Vincent-Clark
- Director, Office of Financial AidMary Chambliss

UNIVERSITY RELATIONS AND DEVELOPMENT

- Vice President for University Relations and DevelopmentHomer R. Wheaton (Interim)
- Associate Vice President.....Homer R. Wheaton
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- Assistant Vice President-
Director of DevelopmentDelorse Lewis
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- Director of Conferences and Special EventsCathy Summers
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- Director of Gentry Center Programs.....Eunice Bell
B.S., 1969 Tennessee State University; M.Ed., 1993 Tennessee State University
- Director of Public Relations.....Sherre M. Bishop
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STUDENT AFFAIRS

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- Dean of Students, Avon Williams CampusWilliam Hytche
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- Director of TSU Police Department.....Sylvia Russell
B.S., 1963, Tennessee State University
- Director Career Center.....Inman Otey
B.S., 1959, Tennessee State University.
- Director of Counseling Center.....Fannie Perry
B.S., 1963, Alcorn State University; M.S., 1972, Tennessee State University.
- Director Student Health Services.....Ivan Davis
B.S., 1964, Tennessee State University; M.S., 1965, Tennessee State University; M.D., 1974, Meharry Medical College.
- Director of Graduate and Professional OpportunitiesAngela M. Robertson
B.S., 1988, Southern University-Baton Rouge; M.Ed., 1995, Union University
- Director of Cooperative Education.....William Gittens
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- Director TRIO ProgramsMary Y. Love
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- Director of Student Activities.....Ronald Myles
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- Director of Disabled ServicesPatricia Scudder
B.S., 1966, Murray State University, M.L.S., 1969, Indiana University
- Director of Campus CenterAuthor Laird
B.A., 1969, University Arkansas-Pine Bluff; M.S., 1984, University of Arkansas-Pine Bluff.
- Director of Parent RelationsCarlton Bowen
B.S., 1963, Tennessee State University.

BUSINESS AND FINANCE

- Vice President for Business and FinanceCynthia Brooks
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- Associate Vice President and Director of Finance and AccountingRobert Hughes
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- Assistant Vice President and Director of Facilities ManagementSamuel Polk
B.S., 1968, Jackson State University; M.S., 1972, Kent State University; Ed.D., 1986, Mississippi State University.
- Director of Budget and Fiscal PlanningBradley White
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- Associate Vice President for Technology and Administrative Services and Director of Human Resources.....Linda Coleman Spears
B.A., 1972, Southern Methodist University; M.S., 1976, Texas A & M University (Corpus Christi).
- Director of Purchasing & Business Services.....Frank Battle
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TECHNOLOGY AND ADMINISTRATIVE SERVICES

Vice President for Technology and Administrative ServicesDennis J. Gendron
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Associate Vice President- Communications and Information Technologies.....Khalid Chaudhary
 B.Sc., 1963, University of Punjab; M.Sc., 1965, University of Punjab; M.A.Sc., 1982, University of Windsor (Canada).

RESEARCH AND SPONSORED PROGRAMS

Vice President for Research and Sponsored ProgramsMarcus W. Shute
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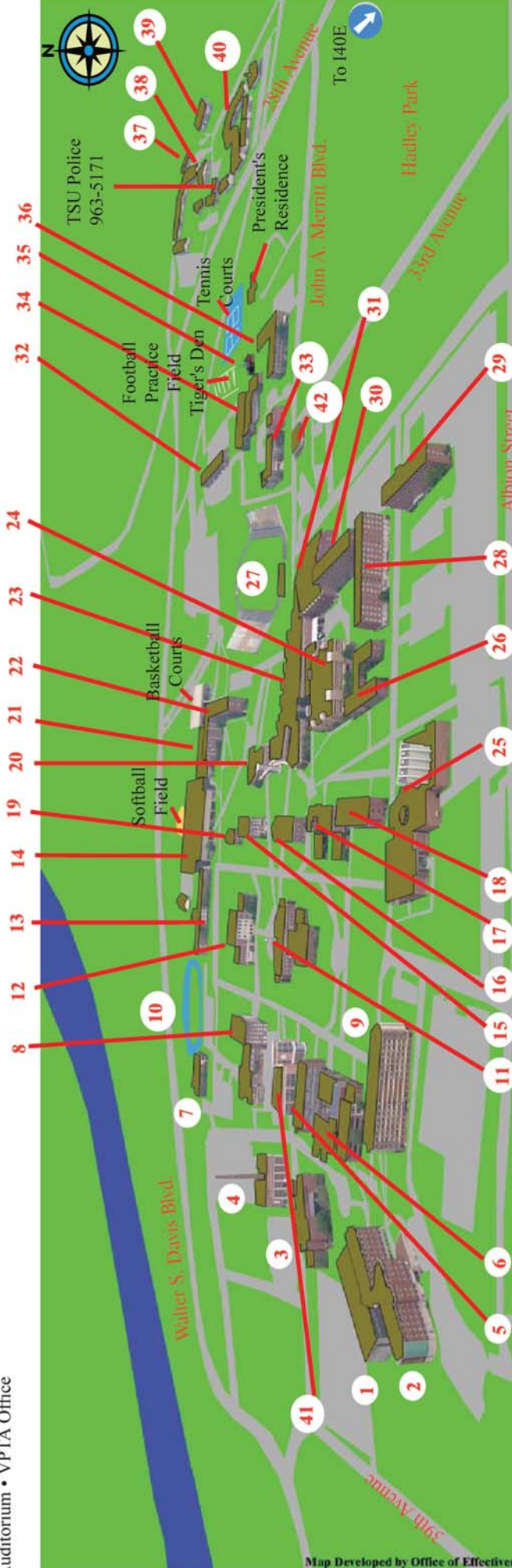
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- 1. **ET Torrence Hall** - College of Engineering
- 2. **Rudolph Hall** - Female Housing
- 3. **SB Holland Hall** - College of Business • Centers of Excellence (Robotics Engineering Lab, Testing Center)
- 4. **Power Plant** - Chilllers • Boilers
- 5. **GRD Crouch Hall** - Graduate School • History • Political Science • Geography • Criminal Justice • Dean Arts & Sciences • TSLAMP/Massie Chair • Interdisciplinary Studies
- 6. **PMB Boswell Complex** - Physics • Math • Chemistry
- 7. **Queen Washington Health Bldg** - Health Clinic • Psychologist Office • Internal Audit • Ombudsman
- 8. **WB Elliott Hall (Women Bldg)** - Art Dept • Effectiveness, Quality & Assessment • Africana Studies • Van Gordon Art Gallery • Sociology Dept • Social Work Dept
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- 10. **Temple Track** - Track / Infield System
- 11. **HUM Davis Hall (Humanities Bldg)** - Languages, Literature, Philosophy • CIT Division / Labs • Poag Auditorium • VPTA Office
- 12. **LRC H.M. Love Learning Research Cntr** - Media Center • Developmental Studies • Title III • Events Mgt • Honors Cntr.
- 13. **Hankal Hall** - Female Housing
- 14. **PEC Gentry Complex** - HPSS Dept • Athletics • Ticket Office • Activities Mgt • Athletics HOF • McClendon Court • Hughes Pool • Indoor Track • Crutchfield Weight Room • Crutchfield HOF
- 15. **HH Harmed Hall** - Biology
- 16. **IND Industrial Arts Bldg** - Engineering / AIT • Health Sciences
- 17. **MH McCord Hall** - Biology • Computer Science • CIT Offices / Labs
- 18. **ED Clay Hall** - Education
- 19. **Goodwill Manor** - Alumni Affairs • Development • Foundation
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- 25. **MUS Strange Music/Performance Arts Bldg** - Music Dept. • Greer Band Room • Recital Hall • Cox-Lewis Theater • TV Studio • Comm / Drama Dept.



- 26. **CLH Clement Hall** - Health Sciences Dean • Dental Clinic / Dept. • OT / PT
- 27. **Hale Stadium Fieldhouse**
- 28. **Watson Hall** - Male Housing
- 29. **Eppse Hall** - Female Housing
- 30. **Boyd Hall** - Male Housing
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