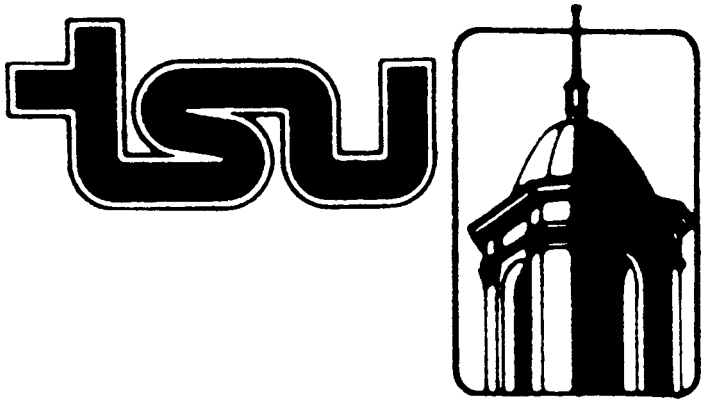
TENNESSEE STATE UNIVERSITY

THE SCHOOL OF GRADUATE STUDIES AND RESEARCH

2001-2003 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, 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 Equal Employment Opportunity/Affirmative Action
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 Equal Opportunity and Affirmative Action
McWherter Administration Building, Suite 260
(615) 963-7435

OR

Dan Steely, 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 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 8,650. The graduate student population numbers more than 1,600. 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 Statement of Mission

Tennessee State University, an 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 Vice President for Academic Affairs.

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 petiitions 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 (1866 Southern Lane, Decatur, Georgia 30033-4097; Telephone number 404-679-4501) to award the Associate, Bachelor's, Master's, Specialist in Education, and Doctor's degrees.
- **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 for the Advancement of 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.
- **Program:** The Master's program in Speech and Hearing Sciences is accredited by the American Speech-Language Hearing Association.
- **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.

INSTITUTIONAL MEMBERSHIPS

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

- American Council on Education
- American Psychological Association (APA)
- AACSB International—The Association for the Advancement of 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 Colleges and Schools of Education in State Universities and Land Grant Colleges (ACSESULAC)
- 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 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
- World Council for Curriculum and Instruction (WCCI)

THE SCHOOL OF GRADUATE STUDIES AND RESEARCH
THE 2001-2002 CALENDAR

FALL SEMESTER 2001

July 1	Priority deadline for applications for Admission to the University for Fall 2001
August 16-17	Faculty Institute
August 19	Graduate Student Orientation
August 20	Advisement and Registration for New Students
August 21-22	Registration
August 23	Classes begin
August 23-24	Late Registration and Drop/Add. See class schedule booklet for details
September 3	Holiday — Labor Day
September 11	Graduate Council Meeting
September 8 & 15	DOCTORAL EXAMINATIONS
September 21	Last day to file Application for M.Ed., M.P.A., and M.S. Comprehensive Examinations for students graduating in Fall 2001
October 5	Last day to file Application for M.Ed., M.P.A., and M.S. Comprehensive Examinations for students graduating in Spring 2002[1]
October 5	Applications due in major department for students completing undergraduate and graduate degree requirements in Spring 2002
October 15-19	Mid-Term Examinations
October 16	Graduate Council Meeting
October 19	M.P.A. COMPREHENSIVE EXAMINATION
October 20	M.Ed. and M.S. COMPREHENSIVE EXAMINATIONS
October 30	Last day to sign in Theses & Dissertations in Graduate School Office, for December Graduation
October 26	Last day to withdraw from courses — Office of Records Last day to withdraw from University — University Counseling Center
November 1	Priority deadline for applications for admission to the Graduate School for Spring 2002
November 9	Last Day to file for Doctoral Examinations for January 2002
November 13	Last Day to Defend Theses/Doctoral Dissertations
November 13	Graduate Council Meeting
November 22-23	Thanksgiving Holiday
November 28	Last Day to deposit Theses/Dissertations with Graduate School
December 5	Last Day of Classes
December 6-14	Final Examinations for Fall 2001
December 18	Final Grades due in the Office of Records by 12:00 Noon

[1] Beginning Fall 2001, application deadlines for Graduation and for Master's Comprehensive Examination will coincide.

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 2002

January 2	University Re-Opens 8:00 a.m.
January 4-7	Registration
January 8	Classes Begin
January 8	Graduate Council Meeting
January 8-9	Late Registration, Drop/Add
January 12 & 19	DOCTORAL EXAMINATIONS
January 21	Holiday — Martin Luther King Day
February 8	Last Day to file Application for M.P.A., M.ED., & M.S. Comprehensive Examination in Summer 2002
February 8	Applications due in major departments for students completing undergraduate and graduate requirements in Summer 2002
February 12	Graduate Council Meeting
February 15	Complete Applications due for Doctoral Programs in Psychology and Administration and Supervision
February 25-March 1	Mid-Term Examination Week
March 4-8	Spring Break
March 15	Complete Applications due for Master's Program in Nursing; Speech and Hearing Science
March 18	Last day to sign in Dissertations/Theses in Graduate School Office for May graduation.
March 19	Graduate Council Meeting
March 22	M.P.A. COMPREHENSIVE EXAMINATION
March 23	M.ED., M.S. COMPREHENSIVE EXAMINATIONS
March 26	Last day to withdraw from courses — Office of Admissions Last day to withdraw from University — Counseling Center
March 29	Holiday — Good Friday
April 1	Priority deadline for applications for admission to the Graduate School for Summer 2002
April 1	Last day to defend Dissertations/Theses
April 12	Applications due in major department for students completing undergraduate and graduate degree requirements in December 2002
April 12	Last Day to file Application for M.P.A., M.ED., & M.S. Comprehensive Examination in Fall 2002
April 15	Last day to deposit Dissertations/Theses with Graduate School
April 16	Graduate Council Meeting
April 25-26	Final Examinations for all students completing degree requirements in May 2002.
April 29	Final Grades for students completing degree requirements in May due in the office of Records by 12:00 Noon
May 1	Last day of classes
May 2-10	Final Examinations for Spring 2002
May 3	Last day to file for doctoral examinations for June
May 11	Spring Commencement
May 15	Final Grades due in Office of Records 12:00 Noon

SUMMER SESSIONS 2002

(Summer School Dates are Subject to Change)

May 24 - June 27	Summer I
May 24 - August 1	Full Term
July 1 - August 1	Summer II
August 3	Commencement

SUMMER SCHEDULE & DEADLINES

June 8 & 15	DOCTORAL EXAMINATIONS
June 18	Last day to sign in Dissertations/Theses in Graduate School Office for August Graduation
June 21	M.P.A. Comprehensive Examination
June 22	M.Ed. and M.S. Comprehensive Examinations
July 2	Last day to defend Theses/Dissertations
July 16	Last day to deposit Theses/Dissertations in the Graduate School
July 29	Last day to file for doctoral examinations in September

SUMMER I

May 24	Registration, All Summer Sessions
May 27	Classes Begin
May 27	Late Registration, Drop/Add
June 14	Last day to withdraw from courses — Office of Records
	Last day to withdraw from University — University Counseling Center
June 26	Last Day of Classes
June 27	Final Examinations

SUMMER II

July 1	Late Registration, Drop/Add
July 1	Classes Begin
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2002
July 4	Holiday — Independence Day
July 21	Last day to withdraw from courses — Office of Records
July 21	Last day to withdraw from the University — University Counseling Center
July 31	Last Day of Classes
August 1	Final Examinations
August 3	Summer Commencement

FULL SUMMER SESSION

May 24	Registration, All Summer Sessions
May 27	Classes Begin
May 27	Late Registration, Drop/Add
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2002
July 4	Holiday — Independence Day
July 11	Last day to withdraw from courses — Office of Records Last day to withdraw from the university — University Counseling Center
July 31	Last Day of Classes
August 1	Final Examinations
August 3	Summer Commencement

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.

FALL 2002, SPRING 2003, SUMMER 2003 CALENDAR

After August 2001, please see the TSU Web site or contact the TSU Graduate School for the 2002-2003 Calendar. This will be the common Calendar for Tennessee State University, Austin Peay State University, and Middle Tennessee State University.

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.

1996 The Psychology doctoral program degree designation changed from Ed.D. to Ph.D.

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.

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

GRADUATE DEGREES AWARDED BY COLLEGES, SCHOOLS, AND INSTITUTES

Tennessee State University is authorized to grant the following degrees:

COLLEGE, SCHOOL, INSTITUTE	MAJOR	CONCENTRATIONS	DEGREE/CERTIF.
Department			
AGRICULTURE & CONSUMER SCIENCES			
Agricultural Sciences	Agricultural Sciences	Animal Science Plant Science Agribusiness Agricultural Education	M.S.
Family & Consumer Sciences	Family & Consumer Sciences		M.A.Ed.
ALLIED HEALTH			
Speech Pathology & Audiology	Speech and Hearing Science		M.S.
Physical Therapy	Physical Therapy		M.P.T.*
ARTS & SCIENCES			
Biological Sciences	Biology		M.S.
	Biological Sciences		Ph.D.
Chemistry	Chemistry		M.S.
Criminal Justice	Crim. Jus. Admin.		M.C.J.
Languages, Literature & Philosophy	English		M.A.
Music	Music Ed.		M.S.
Physics & Mathematics	Mathematical Sciences		M.S.
BUSINESS			
Business	Business Admin.		M.B.A.
EDUCATION			
Educational Administration	Administration and Supervision	K-12 Administration Higher Education Administration	Ed.D.
	Administration and Supervision		M.Ed., Ed.S.
Human Performance and Sport Sciences	Health, Physical Ed., Recreation	Health & Physical Ed. Recreation Adm.	M.A.Ed.
Psychology	Guid. & Coun.	PreK-12 School Counseling	M.S.
	Psychology	Counseling Psychology School Psychology	Ph.D.
	Psychology	School Psychology	Ed.S.
	Psychology	Counseling Psychology School Psychology	M.S.
Teaching & Learning	Curriculum & Instruction	Curriculum Planning Elementary Education Secondary Education Reading Special Education	Ed.D.
	Curriculum & Instruction	Secondary School Instruction Adult Education Educational Technology History Tch. Non-English Lang. Child Reading	M.Ed.
	Elem. Ed.		M.Ed.
	Special 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.
	Computer and Information Systems Engineering		M.S.
Engineering	Engineering	Biomedical Eng. Civil Eng. Environmental Eng. Electrical Eng. Mechanical Eng. Manufacturing Eng.	M.E.
INSTITUTE OF GOVERNMENT			
Institute of Government	Public Admin.		M.P.A., Ph.D.
	Health Administration and Planning		Certificate
NURSING			
Nursing	Nursing	Holistic Nursing Family Nurse Practitioner	M.S.N.

*Master of Physical Therapy Program – see p. 67 for status of this program.

TENNESSEE STATE UNIVERSITY
2001-2002 FEES

(Per Semester)

Fees for 2002-2003 will be published when approved by the Tennessee Board of Regents.

UNDERGRADUATE TENNESSEE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9hrs.	10hrs.	11hrs.	12+hrs.
MAINTENANCE	$107	$214	$321	$428	$535	$642	$749	$856	$963	$1,070	$1,177	$1,278
DEBT SERVICE	6	12	18	24	30	36	42	48	54	60	65	65
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	35	35	35	35	35	35	35	35	35	35	35	35
POST OFFICE BOX							10	10	10	10	10	10
TECHNOLOGY ACCESS	12	24	36	48	60	72	84	96	108	113 *	113 *	113 *
TOTAL	$163	$288	$413	$538	$663	$788	$923	$1,048	$1,173	$1,291 *	$1,403 *	$1,504 *

UNDERGRADUATE OUT-OF-STATE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9hrs.	10hrs.	11hrs.	12+hrs.
MAINTENANCE	$107	$214	$321	$428	$535	$642	$749	$856	$963	$1,070	$1,177	$1,278
TUITION	270	540	810	1,080	1,350	1,620	1,890	2,160	2,430	2,700	2,970	3,236
DEBT SERVICE	6	12	18	24	30	36	42	48	54	60	65	65
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	35	35	35	35	35	35	35	35	35	35	35	35
POST OFFICE BOX							10	10	10	10	10	10
TECHNOLOGY ACCESS	12	24	36	48	60	72	84	96	108	113 *	113 *	113 *
TOTAL	$433	$828	$1,223	$1,618	$2,013	$2,408	$2,813	$3,208	$3,603	$3,991 *	$4,373 *	$4,740 *

GRADUATE TENNESSEE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9+hrs.
MAINTENANCE	$191	$382	$573	$764	$955	$1,146	$1,337	$1,528	$1,716
DEBT SERVICE	6	12	18	24	30	36	42	48	65
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	35	35	35	35	35	35	35	35	35
POST OFFICE BOX							10	10	10
TECHNOLOGY ACCESS	12	24	36	48	60	72	84	96	113 *
TOTAL	$247	$456	$665	$874	$1,083	$1,292	$1,511	$1,720	$1,942 *

GRADUATE OUT-OF-STATE STUDENTS

HOURS	1hr.	2hrs.	3hrs.	4hrs.	5hrs.	6hrs.	7hrs.	8hrs.	9+hrs.
MAINTENANCE	$191	$382	$573	$764	$955	$1,146	$1,337	$1,528	$1,716
TUITION	270	540	810	1,080	1,350	1,620	1,890	2,160	3,236
DEBT SERVICE	6	12	18	24	30	36	42	48	65
STUDENT GOVERNMENT	3	3	3	3	3	3	3	3	3
STUDENT ACTIVITY	35	35	35	35	35	35	35	35	35
POST OFFICE BOX							10	10	10
TECHNOLOGY ACCESS	12	24	36	48	60	72	84	96	113 *
TOTAL	$517	$996	$1,475	$1,954	$2,433	$2,912	$3,401	$3,880	$5,178 *

RESIDENCE FACILITIES:

	Single	Double	Triple	Per Student
On-Campus Ford Complex	n/a	n/a	n/a	$1,775
On-Campus All Others	$1,620	$1,190	$770	n/a
Off-Campus Leased by TSU	n/a	n/a	n/a	$1,575

MEAL PLANS**:

19 Meals	$780
10 Meal	$665
10 Meals +$200	$865
5 Meals	$260

OTHER FEES:

Orientation	$40
Int'l Students	$30/Semester; $0 Summer
Parking	$45/Year (non-refundable)

* The TAF maximum is $113 for Fall 2001/Summer 2002 and $112 for Spring 2002. Therefore, decrease by $1.00 all asterisked amounts for Spring 2002.

**Residents of Hale Street and off-campus University-leased housing 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.

SPECIAL FEES

(fees subject to change without notice)

Add/Drop (per form)	$5.00
Application Fee (non-refundable, should be included with the application)	25.00
Bad Check Charge	25.00
Comprehensive Exam	15.00
Credit/Audit Change	10.00
Duplicate I.D. Card	10.00
Graduation Fee	
Master's	35.00
Specialist	35.00
Doctoral	45.00
International Student Fee (This is not assessed for the Summer Term)	30.00
Late Registration	25.00
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
Motor Vehicle Registration (non-refundable)	45.00
Property Damage (Actual Value)	
Room Deposit (per semester)	50.00
Theses and Dissertations	
Thesis Binding	40.00
Dissertation Binding	45.00
Dissertation Continuation, on Sixth Registration	25.00
Thesis Continuation, on Second Registration	25.00
Dissertation/Thesis Micro-filming	
Master's (optional)	45.00
Doctoral	55.00
Dissertation Copyright (optional)	45.00

FEE PAYMENT

All fees must be paid at the time of registration unless covered by authorized deferment. Payment can be made using **cash** (please do not mail cash), **checks** (personal check, cashiers/bank checks and money orders), **credit cards** (MasterCard and VISA only) or **bank wires** (wire to AmSouth Bank account #06200019-1001152956; the student's social security number must be referenced on the wire). Entering courses without paying fees does not constitute registration.

FINANCIAL REGULATIONS

Students will not be permitted to register for the new semester or remain in dormitory residences in 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 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 $75.00 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	May 1
Fall Semester	August 1
Spring Semester	December 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. Vice President for Academic Affairs
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 SERVICES

The Student Services Program's aim is to assist the student 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 Services Program resides with the Vice President for Student Affairs and the Council of 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 pertaining to student affairs.

STUDENT DEVELOPMENT SERVICES

The Student Development Services Programs are designed to help all students grow in self-understanding so that they may use their assets more effectively and plan attainable and meaningful goals for the future. These services are available to each student free of charge at both the Main Campus and the Avon Williams Campus.

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. Student suffering from complex medical/surgical problems are hospitalized at local hospitals of their choice (at their own expense). The University accept no responsibility for any student requiring hospitalization. Therefor, 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

These services are designed to assist students with disabilities in functioning within the University setting and to enable them to participate fully in all Tennessee State University academic, cultural, and social activities. This service also functions to identify and aid in the removal of physical barriers that prevent free and open access to University facilities. 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

Named in honor of the first Library Director, Ms. Martha M. Brown, and second Library Director, Ms. Lois H. Daniel, the Brown-Daniel Library was built in 1976. The Library consists of three floors with seating capacity of 500. Another library facility is on the Avon Williams Campus, built in 1969 and named Avon Williams in 1986 in honor of the civil rights leader, lawyer and senator Avon Williams, Jr. The Libraries house 578,086 volumes, including book collections, special collections, periodical collections and federal government publications and subscribe to 1,555 print and online periodicals. The microform collection includes ERIC Documents, selected periodical and newspaper titles totaling 816,415 microfiche cards, 15,578 microfilm reels and 114,906 government documents in microfiche format. The Libraries provide access to electronic resources including 54 online databases, 30 online journals and over 12,000 electronic books and an online catalog of books at both libraries accessible from any location on and off campus. Information about library services, policies, electronic document delivery, library consortiums and related information may be found on the Library's web page located at *http://www.tnstate.edu* or *http://www.tnstate.edu/library*. Main Campus Library houses two academic computing labs with 32 workstations, and 23 workstations throughout the Library for research and word processing. A Smart Classroom with 30 workstations is used for Library Orientation classes and training. Media Centers at both campuses house audiovisual materials and equipment, including videocassettes, audiocassettes, slides, filmstrips, camcorders, VCRs and smart carts.

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 (GPO) 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;
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 obtaining 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 meeting 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 Administration and Supervision, Ed.D., Biological Sciences, Ph.D., Criminal Justice, Nursing, Psychology, Ph.D., 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 15
Summer Semester	April 15

Nursing:

Summer Admission Only	March 15

Speech Pathology:

Fall Admission Only	March 15

Biological Sciences Doctoral Program:

Fall Admission only	March 15

Administration and Supervision Doctoral Program:

Fall Admission only	February 15

Psychology Doctoral Program:

Fall Admission Only	February 15

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 transcipts 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.

Note: Students born after 1956 must submit proof of measles immunization. This information must be submitted prior to registration.

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 Standardized Test 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), 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 Standardized Test Requirements for Admission to Graduate Programs, 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. Acceptance by the graduate program/department and 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 (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.

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.

Standardized Test Requirement for Admission to Graduate Programs

PROGRAM	REQUIRED ENTRANCE EXAMINATION
Non-Degree Seeking	None
Master's Programs	
BIOLOGY	GRE - (V & Q)
CHEMISTRY	*GRE - (V, Q, & S)
MATHEMATICAL SCIENCES	GRE - (V & Q)
PUBLIC ADMINISTRATION	GRE - (V & Q)
SPEECH PATHOLOGY & AUDIOLOGY	GRE - (V & Q) or MAT
AGRICULTURAL SCIENCE	GRE - (V, Q, & S) or MAT
FAMILY AND CONSUMER SCIENCES	GRE - (V, Q, & S) or MAT
CRIMINAL JUSTICE ADMINISTRATION	*GRE - (V, Q, & S) or MAT
ENGLISH	*GRE - (V, Q, & S) or MAT
MUSIC EDUCATION	*GRE - (V, Q, & S) or MAT
COLLEGE OF EDUCATION (ALL MAJORS):	*GRE - (V, Q, & S) or MAT
Administration & Supervision	Human Performance & Sports Sciences
Elementary Education	Psychology
Curriculum & Instruction	Guidance and Counseling
Special Education	
BUSINESS ADMINISTRATION	GMAT
ENGINEERING	FE (if GPA is less than 2.74 on 4.0 System)
NURSING	GRE-(V&Q) or MAT

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

Specialist Degree Program	
ADMINISTRATION AND SUPERVISION	GRE-(V&Q) or MAT
SCHOOL PSYCHOLOGY	GRE-(V&Q) or MAT
Doctoral Degree Programs	
ADMINISTRATION AND SUPERVISION	GRE-(V&Q) or MAT
BIOLOGICAL SCIENCES	GRE-(V, Q & S)
CURRICULUM AND INSTRUCTION	GRE-(V&Q) or MAT
PSYCHOLOGY	GRE-(V&Q) or MAT
PUBLIC ADMINISTRATION	GRE-(V&Q)

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 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.
8. After admission, copies of Visa or Alien Registration card must be submitted before student may enroll.

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	May 1
Fall Semester	August 1
Spring Semester	December 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. Vice President for Academic Affairs
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 overload 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 Vice President for Academic Affairs 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 Vice President for Academic Affairs if the dean is the instructor). In such cases. the decision of the Vice President for Academic Affairs 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 my 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 be allowed because of interruptions in graduate studies due to maternity 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.

APPLICATION FOR GRADUATION

The Application for Graduation should be completed early in the semester before the student intends to graduate (dates are given in Calendar section). The Application must be submitted to the Advisor, and signed by the Department Head and Dean prior to submission to the Graduate School Office. 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/osr.

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 500 or Spanish 500.

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: ENG 505, 509, or 510. 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. 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.

This degree is offered in Human Performance and Sports Sciences and Family and Consumer Sciences.

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 capabilities. 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 may be chosen to provide specialized preparation for a profession.

After satisfaction of prerequisites, requirements include a minimum of thirty-four (34) 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 teacher education programs. This degree is offered in Administration and Supervision, Elementary Education, Health and Physical Education, Home Economics 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 production & operations management;
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 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; Family and Consumer Sciences; 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 two concentrations, *Holistic Nursing* and *Family Nurse Practitioner.* 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 weekend learning options for part-time students. A nurse working full-time and attending graduate school part-time may complete the program in 6 semesters.

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 advance 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.

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.

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.

CERTIFICATE PROGRAM

A certificate program is a planned sequence of graduate-level courses that does not itself lead to a graduate degree. The Certificate in Health Administration and Planning is offered through the Institute for Government (please see this section of the Catalog for details).

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
FAX 615-963-7588

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. 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 159 full-time faculty members, of whom 79 percent have doctoral degrees. There are over 2600 student majors in Arts and Sciences, approximately one hundred 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	9	100
Criminal Justice	3	100
History, Geography, and Political Science	10	100
Languages, Literature, and Philosophy	11	100
Music	4	75
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: BIOLOGICAL SCIENCE
DEGREE: DOCTOR OF PHILOSOPHY
MAJOR: BIOLOGY
DEGREE: MASTER OF SCIENCE (M.S.) — THESIS OPTION
MASTER OF SCIENCE (M.S.) — NON-THESIS OPTION

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 Sciences 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 Home Economics. 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 a fully 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 and quantitative portions of the Graduate Record Examination.

Conditional admission may be gained with a lower grade point average, 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. 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, for unconditional admission the applicant must have accumulated a minimum of 24 acceptable semester hours in Biology plus a minimum of four semester hours of biochemistry. In some instances, conditional admission may be granted prior to the completion of these undergraduate course requirements, but a student must complete these courses before taking any graduate courses.

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 the 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

BIO 501, 502	Graduate Seminar I, II	1,1
BIO 510	Literature and Methods in Research	3
BIO 511	Research in Biology	2
BIO 512	Thesis Writing (required only in thesis option)	4
BIO 518	Cell Biology	3
CHEM 541, 542	Advanced Biochemistry I, II	6
PSY 502 or Equivalent	Statistics for Research in Education and Psychology	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.

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, 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: 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.

Admission Requirements: Ph.D. Program

Applicants to the Ph.D. program must submit a completed application form, a personal statement, 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 the applicant to have a bachelor's degree from a fully accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, a GRE verbal and quantitative minimal score of 870, and a minimum score of 600 on the GRE subject test in Biology. Students may also be admitted with GRE general and subject test scores below 870 and 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), none 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 (BIO 701, 702), 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. That total number hours required is 76.

Required Courses: 24 Hours

To be completed prior to Admission to Candidacy

BIO 510	Literature and Methods in Research	3
BIO 518	Cell Biology	3
BIO 610	Frontiers in Molecular Science	3
BIO 712	Molecular Biology	3
CHEM 541, 542	Advanced Biochemistry I, II	6
CHEM 560	Spectroscopic Methods in Chemistry	3
STAT 521	Statistical Methods I	3

After Admission to Candidacy: 51 Hours

Electives		23
BIO 501, 502	Graduate Seminar I, II	1, 1
BIO 701, 702	Seminar in Biology I, II	1, 1
BIO 811	Dissertation Research	24
Total Required Hours		76

Graduate Elective Courses

BIO 507, 508	Methods of Teaching Science in the College/University Setting	6
BIO 513	Evolution	3
BIO 514, 515	Special Problems I, II	3, 3
BIO 516	Environmental Genetics	3
BIO 517	Advanced Genetics	3
BIO 518	Cell Biology	3
BIO 519	Ecology	3
BIO 520	General Physiology	3
BIO 521	Embryology	3
BIO 522	Advanced Parasitology	3
BIO 523	Arthropods and Diseases	3

BIO 524	Systemic Physiology	3
BIO 530	Plant Physiology	3
BIO 540	Microbial Genetics	3
BIO 541	Molecular Genetics	3
BIO 546	Immunology	3
BIO 547	Special Topics in Immunology	3
BIO 604	Individual Studies	3
BIO 610	Frontiers in Molecular Science	3
BIO 611	Individual Research	3
BIO 621	Introduction to Neuropharmacology	3
BIO 656	Techniques of Electron Microscopy	3
BIO 712	Molecular Biology	3
BIO 713	Molecular Genetics	3
BIO 717	Selected Topics in Molecular Genetics	3
BIO 718	Advanced Cell Biology	3
BIO 719	Advanced Molecular Biology	3
BIO 726	Neurobiology	3
BIO 727	Selected Topics in Neurobiology	3
BIO 741	Advanced Microbiology	3

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 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.

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

BIO 501, 502. GRADUATE SEMINAR I, II. (1, 1) Current problems in biology. Courses meet weekly during each semester of the regular school year and summer terms. Both courses are required of all degree candidates in the Department.

BIO 507, 508. 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, makes preparation and teaches at least one unit of subject matter. Prerequisite: Permission of major advisor and faculty mentor.

BIO 510. LITERATURE AND METHODS IN RESEARCH. (3) The methods of literature review, with primary emphasis on methods in biological research and research laboratory rotation. The student is expected to concentrate on the 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 BIO 517.

BIO 511. 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: BIO 510. Required of all M.S. candidates. Formerly BIO 516.

BIO 512. 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: BIO 511. Required of all students who write a thesis.

BIO 513. 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.

BIO 514, 515. 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 carrying out the assigned problem. Prerequisite: permission of instructor and thesis or graduate advisor. Three laboratory periods.

BIO 516. ENVIRONMENTAL GENETICS. (3) The diversity of organisms, populations, and communities. Specific intricacies of the living world are elucidated. The 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 BIO 212, 212L (Principles of Genetics) and BIO 547 (Special Topics in Immunology) or the equivalents, may elect this course. Prerequisite: permission of instructor. Two lectures and one laboratory period weekly. Formerly BIO 510.

BIO 517. 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. Formerly BIO 511.

BIO 518. 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.

BIO 519. ECOLOGY. (3) Study of how ecological systems function and the reciprocal interrelationships 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: BIO 412, 412L (Principles of Ecology) or permission of instructor. Two lectures and one laboratory period.

BIO 520. 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.

BIO 521. EMBRYOLOGY. (3) The principles and mechanisms of developmental physiology. Prerequisite: BIO 421, 421L (Embryology) or equivalent, or permission of instructor. Two lectures and one laboratory period. Formerly ZOO 530.

BIO 522. 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 per week. Formerly ZOO 541.

BIO 523. 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 hyperparasiticity 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 per week. Formerly ZOO 542.

BIO 524. 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. Formerly ZOO 590.

BIO 530. 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.

BIO 540. 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: BIO 212, 212L (Principles of Genetics) and permission of instructor. In addition, BIO 511 is recommended.

BIO 541. 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.

BIO 546. IMMUNOLOGY. (3) Topics concerning all aspects of antigen-antibody reactions. Emphasis is placed on laboratory problems and procedures associated with immunology. Prerequisites: BIO 340, 340L (Introduction to Microbial Physiology), 440, 440L (Pathogenic Microorganisms), and 441, 441L (Immunology and Serology), or permission of instructor. Two lectures and one laboratory period. Formerly MCB 560.

BIO 547. 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 per week. Formerly MCB 660.

BIO 604. INDIVIDUAL STUDIES. (3-9) Doctoral individual study under the guidance of the graduate curriculum advisory committee and may not 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.

BIO 610. 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. Prerequisites: CHEM 541, 542. Required of all Ph.D. candidates.

BIO 611. 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.

BIO 621. 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.

BIO 656. 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.

BIO 701, 702. 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 701 and 702 in their first two semesters of residency, unless they have not completed BIO 501 and 502 or the equivalent, in which case they must register for these courses. Each course may be repeated once for an additional hour of credit. BIO 501 and 502 are prerequisites to 701, and 701 is a prerequisite to 702.

BIO 712. 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 541, 542. Required of all Ph.D. candidates.

BIO 713. 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 541, 542.

BIO 717. 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.

BIO 718. 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 518,CHEM 541, 542, or permission of instructor.

BIO 719. 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: BIO 712.

BIO 726. 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.

BIO 727. 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.

BIO 741. 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.

BIO 811. 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, Assistant 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, Assistant Professor
B.S., 1976, Ph.D., 1983 University of Nigeria Nsukks

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

Michael Ivy, Assistant 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, Associate 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

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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 a fully 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

Students are required to take at least one three-hour course each in inorganic, organic, physical, and analytical chemistry. The student must complete and defend a thesis based upon his or her research. This research should involve contributions of a publishable quality. There is no foreign language reading requirement for the M.S. degree in Chemistry.

The M.S. degree requires thirty semester hours of course work: twenty-one hours of required courses, including research and thesis writing, and nine hours of suggested electives chosen with the consent of the research advisor.

1. Required Courses: 21 hours

CHEM 500	Advanced Inorganic Chemistry I	3
CHEM 511	Research	5
CHEM 512	Thesis Writing	2
CHEM 521	Advanced Organic Chemistry I	3
CHEM 531	Advanced Physical Chemistry I	3
CHEM 551	Advanced Analytical Chemistry	3
CHEM 600A,B	Seminar I, II	1,1

2. Electives: 9 hours, with the consent of the advisor

CHEM 501	Advanced Inorganic Chemistry II	3
CHEM 522	Advanced Organic Chemistry II	3
CHEM 532	Advanced Physical Chemistry II	3
CHEM 536	Chemical Kinetics	3
CHEM 541, 542	Advanced Biochemistry I, II	3,3
CHEM 560	Spectroscopic Methods in Chemistry	3
CHEM 561, 562	Polymer Chemistry I, II	3,3
CHEM 563	Advanced Polymer Chemistry	3
CHEM 640A	Special Topics in Analytical Chemistry	3
CHEM 640B	Special Topics in Biochemistry	3
CHEM 640C	Special Topics in Inorganic Chemistry	3
CHEM 640D	Special Topics in Organic Chemistry	3
CHEM 640E	Special Topics in Physical Chemistry	3

(Other Electives: 500- or 600-level courses in Biology, Mathematics, Physics, or Engineering)

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 500. 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 322 (Physical Chemistry II) and CHEM420, 420L (Inorganic Chemistry I). Required of all degree candidates. Offered only in fall.

CHEM 501. ADVANCED INORGANIC CHEMISTRY II. (3) Spectroscopic characterization of inorganic and organometallic compounds, and reaction mechanisms of inorganic, organometallic, and bioinorganic compounds. Prerequisite: CHEM 421 (Inorganic Chemistry II) or CHEM 500. Offered only in spring.

CHEM 511. 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 512. 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 521. ADVANCED ORGANIC CHEMISTRY I. (3) A critical study of the structural theory of organic chemistry and advanced discussion of reaction mechanism. Prerequisites: CHEM 212, 212L (Organic Chemistry II [formerly CHEM 312, 312L]) and CHEM 322, 322L (Physical Chemistry II). Required of all degree candidates. Offered only in fall.

CHEM 522. ADVANCED ORGANIC CHEMISTRY II. (3) Synthesis of natural products. Prerequisite: CHEM 521, or permission of instructor. Offered only in spring.

CHEM 531. 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 322, 322L (Physical Chemistry II). Required of all degree candidates. Offered only in spring.

CHEM 532. 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 531, or permission of the instructor. Offered only in the fall.

CHEM 536. CHEMICAL KINETICS. (3) Experimental and theoretical considerations of chemical reaction rates and mechanisms. Prerequisite: CHEM 531. Offered on demand.

CHEM 541. 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 342, 342L (General Biochemistry II), or permission of instructor. Offered only in fall.

CHEM 542. ADVANCED BIOCHEMISTRY II. (3) An in-depth study of the catabolic pathways, including their chemical reactions, energetics, and regulation. Prerequisite: CHEM 541, or permission of the instructor. Offered only in spring.

CHEM 551. ADVANCED ANALYTICAL CHEMISTRY. (3) A critical study of recent developments in chemical and instrumental methods of analysis. Prerequisite: CHEM 322, 322L (Physical Chemistry II). Required of all degree candidates. Offered only in spring.

CHEM 560. 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 212, 212L (Organic Chemistry II) or equivalent. Offered in fall.

CHEM 561, 562. POLYMER CHEMISTRY I, II. (3,3) Organic chemical reactions leading to high polymers, physical properties and physical behavior of polymers, polymer processing, and end uses. Prerequisites: CHEM 212, 212L (Organic Chemistry II) and CHEM 322, 322L (Physical Chemistry II), or permission of the instructor. CHEM 561 offered in fall and 562 in spring.

CHEM 563. ADVANCED POLYMER CHEMISTRY. (3) A detailed study of polymerization reactions of vinylic and non-vinylic monomers with special attention to mechanisms, stereochemistry, and copolymerization, and a brief survey of reactions of polymers. Prerequisites: CHEM 561, 562 or CHEM 461, 462, 462L (Introduction to Polymer Chemistry I, II). Offered on demand.

CHEM 600A, 600B. 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 600A offered in fall and 600B in spring.

CHEM 640A, 640B, 640C, 640D, 640E. 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

William Y. Boadi, Assistant Professor
B.S., 1982, University of Science and Technology (Ghana); M.S., 1988, D.Sc., 1991, Technion-IIT (Israel)

Fu-Ming Chen, Professor
B.S., 1960, Tunghai University (Taiwan); M.S., 1964, Ph.D., 1966, University of Illinois

Peter A. Iyere, Associate Professor
B.S., 1980, M.S., 1982, University of Ibadan (Nigeria); M.A., 1989, Ph.D. 1991, Brandeis University

Mohammad R. Karim, Associate Professor
B.S., 1978, M.S., 1980, Jahangirnagar University (Bangladesh); Ph.D., 1989, Kent State University

Carlos W. Lee, Associate Professor and Department Head
B.S., 1991, Appalachian State University; Ph.D., 1995, University of Tennessee, Knoxville

Ying-Ming Lin, Professor
B.S., 1960, National Taiwan University, Taipei (Taiwan); Ph.D., 1973, University of Tennessee, Memphis

Cosmas O. Okoro, Assistant Professor
B.S., 1981, M.S., 1986, North Carolina Central University; Ph.D., 1993, Howard University

Margaret M. Whalen, Assistant Professor
B.S., 1979, South Dakota School of Mines and Technology; Ph.D., 1984, University of New Mexico School of Medicine

Gregory H. Zimmerman, Associate Professor
B.S.Ed., 1986, Millersville University; Ph.D., 1994, University of Delaware

DEPARTMENT OF CRIMINAL JUSTICE

C. Bruce Mallard, Ph.D., Head
308 Hubert B. Crouch Hall
(Graduate Building)
615-963-5571

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 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 a fully 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 25 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 32. If the GPA is between 2.0 and 2.24, the GRE score must be 690 or the MAT score 39. 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 (CJ 664 and 690) 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

CJ 664	Thesis	3
CJ 690	Research in Criminal Justice	3

2. Distribution of Courses (Required Courses Included) 36 Hours

MIDDLE TENNESSEE STATE UNIVERSITY	
CJ 600 Criminal Justice Administration	3
CJ 601 Seminar in Law	3
Additional Courses	12
	18
TENNESSEE STATE UNIVERSITY	
CJ 602 Judicial Seminar	3
CJ 603 Contemporary Corrections	3
Additional Courses	12
	18

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

CJ 590. 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.

CJ 602. 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.

CJ 603. 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.

CJ 604. 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.

CJ 623. POLICE MANAGEMENT SYSTEM. (3) An analysis of the administrative behavior and organizational problems of change in police management, as well as public reaction.

CJ 625. 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.

CJ 630. 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)

CJ 641. 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.

CJ 643. 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.

CJ 650. 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.

CJ 664. 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: CJ 690.

CJ 670. 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.

CJ 683. 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.

CJ 690. 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 CJ 664.

CJ 692. 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.

CJ 693. 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.

CJ 694. CRIMES, CRIMINALS, AND THEIR TREATMENT. (3) Crime typology, theories of criminal behavior, and methods of treatment. Emphasis is on institutional treatment programs.

CJ 695. 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

C. Bruce Mallard, Associate Professor and Department Head
B.A., 1969, George Peabody College; M.P.A., 1972, Middle Tennessee State University; Ph.D., 1979, University of Tennessee.

David K. Wheaton, Professor
B.A., 1962, Northwestern Christian College; B.D., 1966, Texas Christian University; M.A., 1967, Sam Houston University; Ph.D., 1973, Oklahoma State University

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
FAX 615-963-5497

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 a fully 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 25 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 32. If the GPA is between 2.0 and 2.24, the GRE score must be 1000 or the MAT score 39. 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 semester hours, including 15 hours in the Education core, and 18 hours of History. The student should select 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 511	Research and Statistics in Education	3
EDCI 526	Philosophy of Education	3
EDCI 530	Multicultural Education	3
PSY 543	Advanced Educational Psychology	3
EDCI 610	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 600 level are offered for in-service teachers and for persons enrolled or planning to enroll in doctoral programs.

DESCRIPTION OF COURSES

HISTORY (HIST)

HIST 501, 502. 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 511. HISTORICAL METHODS. (3) The principles and techniques of research in the study of history, including problems in the preparation of a manuscript.

HIST 531, 532. 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 533. AMERICAN HISTORIOGRAPHY. (3) An introduction to historical literature through an analysis of American historians and their writings.

HIST 534. EUROPEAN HISTORIOGRAPHY. (3) An introduction to historical literature through an analysis of European and American historians specializing in European history.

HIST 541, 542. 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. Prerequisites: HIST 301, 302 (Foundations of Modern Europe I, II), or equivalents.

HIST 551, 552. PROBLEMS IN AMERICAN CONSTITUTIONAL HISTORY I, II. (3, 3) A study of selected problems related to the origin and evolution of the principles, institutions, practices, and laws embodied in the American Constitutional system.

HIST 561. SEMINAR IN TWENTIETH-CENTURY BLACK THOUGHT. (3) An intensive study of one of the basic themes of the twentieth-century African-American Revolution: Nationalism vs. Integrationism. The course includes an investigation of selected topics, such as the Washington-DuBois debate, DuBois vs. Garvey vs. Black Communism, Garveyism vs. the NAACP.

HIST 571, 572. 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 575. VITAL TOPICS. (3) Selected subjects on a specific period—local, regional, national, or international in scope. In recent semesters HIST 575 covered the history of Germany from 1918 to 1945, and 575A covered science and technology.

HIST 651, 652. 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 665. ECONOMIC AND SOCIAL HISTORY OF EUROPE, 1815 TO PRESENT. (3) An examination of the economic and social forces, leaders, culture, and politics of Western Europe.

HIST 666. HISTORY OF AMERICAN SCIENCE AND TECHNOLOGY. (3) Selected topics and sources in the historical development of modern science and technology in the United States.

HIST 668. TWENTIETH-CENTURY DIPLOMATIC HISTORY. (3) Study designed to provide the student with a broad background in twentieth-century diplomatic history of the United States.

HIST 671. MODERN AFRICA: POLITICAL AND SOCIAL HISTORY. (3) An investigation of Africa's political and economic development since 1939.

HIST 680. SEMINAR IN NEAR AND MIDDLE EASTERN HISTORY. (3) A study of the Arab and non-Arab states in the Middle East since 1920.

HIST 687. 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 688. 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.

HIST 690, 691. CONTEMPORARY WORLD HISTORY I, II. (3, 3) A survey of global events in modern times. The first semester explores the modern world through the founding and operation of the League of Nations. The second examines the emergence of non-Western politics, including the work and growth of the United Nations.

GEOGRAPHY (GEOG)

GEOG 501. 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 502. ENVIRONMENTAL GEOGRAPHY. (3) The concepts of geography applied to the study of environmental problems. Course focuses on environmental problems common to urban areas, using the black community of Nashville as a laboratory.

GEOG 503. 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 504. 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 505. 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 575. 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 (PISI)

PISI 501. 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.

PISI 513. RESEARCH METHODS. (3) An introduction to the research methods of political science, including data collection, survey research, data analysis, and statistical analysis.

PISI 535. 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.

PISI 560. 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

Reuben H. Brooks, Professor
B.A., 1967, Bemidji State University; Ph.D., 1972, University of Colorado, Boulder

Elizabeth Dachowski, Assistant Professor
B.A., 1984, Indiana University; M.A., 1987, University of Minnesota; Ph.D., 1995, University of Minnesota

Joel H. Dark, Assistant Professor
B.A., 1990, Middle Tennessee State University; M.A., 1991, Vanderbilt University; Ph.D. 1998, Vanderbilt University

Daniel K. Gibran, Associate Professor
B.A., 1976, Middle East College (Lebanon); M.A., 1985, University of Kent (United Kingdom); Ph.D., 1990, University of Aberdeen (Scotland)

Hoyt A. King, Associate Professor
B.A., 1964, Southern University; M.A., 1968, Atlanta University; Ph.D., 1976, West Virginia University

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

Harrill Coleman McGinnis, Associate Professor
B.A., 1965, University of the South; M.A., 1967, Tulane University; Ph.D., 1970, University of Virginia

John P. Miglietta, Assistant Professor
B.A., 1984, Fordham University; M.A., 1987, New York University; Ph.D., 1995, New York University

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

David Padgett, Assistant Professor
B.S., 1987, Western Kentucky University; M.S., 1992, University of Florida

Jyotsna Paruchuri, Professor
B.A., 1959, Queen Mary College, Madras(India); M.A., 1961, Presidency College, Madras (India); Ph.D., 1981, Agra University (India)

DEPARTMENT OF LANGUAGES, LITERATURE, AND PHILOSOPHY

Helen R. Houston, D.A., Interim Head
104 Humanities Building
615-963-5641
FAX 615-963-5725

MAJOR: ENGLISH

DEGREE: MASTER OF ARTS (M.A.)

Jo Helen Railsback, 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 a fully 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 25 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 32. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 39. 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 511 is the only course required of all majors.

A. Required Course

ENG 511	Bibliography and Method	2

B. Electives: 21 to 28 hours with the consent of the advisor.

ENG 502A, B	Independent Study	1-3
ENG 505	Composition and Computers in Literary Studies	3
ENG 508	Critical Papers	1
ENG 509	Linguistics and the English Language	3
ENG 510	History of the English Language	3
ENG 512	Thesis Writing	4
ENG 513, 514, 515	Teaching English to Speakers of Another Language	3, 3, 3
ENG 520	Chaucer	3
ENG 521	Literature of the Middle Ages	3
ENG 522	English Drama and Dramatic Criticism, 1660-1784	3
ENG 523	Studies in European Drama	3
ENG 530	Studies in English Renaissance Literature	3
ENG 532	Studies in Shakespeare	3
ENG 533	Studies in the Age of Reason	3
ENG 534	Studies in the Age of Sensibility	3
ENG 541	Studies in English Romanticism	3
ENG 542	Studies in the Victorian Age	3
ENG 561	Studies in American Literature, 1600-1800	3
ENG 562	Studies in American Literature, 1800-1900	3
ENG 563	Studies in American Literature, 1900-Present	3
ENG 565	Studies in Black American Literature, Beginnings to 1940	3
ENG 566	Studies in Black American Literature, 1940 to Present	3
ENG 570	The Modern Novel	3
ENG 590	Literary Criticism	3
ENG 600A, B	Special Topics in Literature I, II	3,3
ENG 601	Creative Writing	3
ENG 602	Project Writing	2
ENG 613	Research in English Education	3
ENG 615	Teaching Literature in a Diverse Society	3
ENG 616	Teaching Adolescent Literature	3
ENG 651	Studies in Twentieth-Century Poetry	3
ENG 652	Studies in Twentieth-Century Prose	3
ENG 662	Studies in American Literary Thought	3
ENG 665	Seminar in the Harlem Renaissance	3
ENG 680	Major African Writers	3
ENG 690	Apprenticeship in Teaching College English	3

Note: Twelve hours of 600-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 ENG 505, ENG 509, or ENG 510. 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 ENG 512 (4 hours)
2. A project in the teaching of English language or literature, requiring ENG 602 (2 hours)
3. Three critical papers, requiring ENG 508 (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 (ENG)

ENG 502A, B. 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.

ENG 505. 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.

ENG 508. 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.

ENG 509. 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.

ENG 510. 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.

ENG 511. 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.

ENG 512. 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.

ENG 513, 514, 515. 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.

ENG 520. 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.

ENG 521. 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.

ENG 522. 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.

ENG 523. 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.

ENG 530. 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.

ENG 532. STUDIES IN SHAKESPEARE. (3) Problems in major dramatic works, with possible attention to the nondramatic works, especially the sonnets.

ENG 533. 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.

ENG 534. 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.

ENG 541. STUDIES IN ENGLISH ROMANTICISM. (3) An examination of the major poets and prose writers.

ENG 542. STUDIES IN THE VICTORIAN AGE. (3) A study of writers of nonfictional prose, poets, and novelists, from the accession of Queen Victoria until 1900.

ENG 561. 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.

ENG 562. 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.

ENG 563. 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.

ENG 565. 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.

ENG 566. 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.

ENG 570. 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.

ENG. 590. 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.

ENG 600A, B. 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.

ENG 601. 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.

ENG 602. 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.

ENG 613. RESEARCH IN ENGLISH EDUCATION. (3) An investigation of current research in the teaching of composition, language, and literature.

ENG 615. TEACHING LITERATURE IN A DIVERSE SOCIETY. (3) A study of literatures of various groups represented in the elementary, middle, and senior high school curriculum.

ENG 616. 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.

ENG 651. STUDIES IN TWENTIETH-CENTURY POETRY. (3) A study of twentieth-century poets, variously selected each term.

ENG 652. STUDIES IN TWENTIETH-CENTURY PROSE. (3) A study of twentieth-century novelists, essayists, and/or dramatists, variously selected each term.

ENG 662. 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.

ENG 665. 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.

ENG 680. 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.

ENG 690. 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 (FR)

FR 501, 502. ORAL FRENCH I, II. (3, 3) Conversational drill using practical and technical vocabulary, with emphasis on the acquisition of communicative competence.

FR 510. 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.

FR 521, 522. ADVANCED COMPOSITION AND CONVERSATION I, II. (3, 3) Intensive drill in French conversation on contemporary topics, accompanied by discussions and exercises on syntax and composition.

MODERN FOREIGN LANGUAGES (MFL)

MFL 520. THE TEACHING OF FOREIGN LANGUAGES. (3) Current issues, trends, theories, and practices in teaching foreign languages.

MFL 650. 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 (SPN)

SPN 501, 502. ORAL SPANISH I, II. (3, 3) Conversational drill using practical and technical vocabulary, with emphasis on the acquisition of communicative competence.

SPN 510. PHONETICS AND DICTION. (3) Nuances in the Spanish sound system, phonetic transcription, and drill in prose and verse intonation.

SPN 521, 522. ADVANCED COMPOSITION AND CONVERSATION I, II. (3, 3) Modern idiomatic usage through exercises in grammar and oral and written composition.

GRADUATE FACULTY

James L. Head, Professor
B.A., 1964, M.A., 1966, Texas Christian University; Ph.D., 1977, George Peabody College for Teachers

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

Gloria C. Johnson, Professor and Department Head
B.A., 1970, Tennessee State University; M.A., 1971, University of Illinois; Ph.D., 1990, University of Tennessee

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

Marc R. Mazzone, Assistant Professor
B.A., 1974, Williams College; M.A., 1987, Ph.D., 1993, Indiana University

Carolyn S. Moran, Assistant Professor
B.A., 1964, New Mexico State University; M.A.T., 1976, Tulane University; Ph.D., 1996, University of Kansas

Lucas A. Powers, Associate Professor
B.A., 1984, M.A., 1986, University of North Carolina; Ph.D., 1990, Vanderbilt University

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

Jo Helen Railsback, Professor and Coordinator of the Graduate Program in English
B.A., 1956, Baylor University; M.A., 1957, University of Arkansas; Ph.D., 1969, University of Tennessee

Louise W. Watkins, Professor
B.S., 1956, M.A., 1969, Memphis State University; Ph.D., 1986, Vanderbilt University

DEPARTMENT OF MUSIC

Ralph R. Simpson, Ph.D., Head
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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 teacher education programs and to the Graduate School. The purposes of the graduate program are to advance knowledge in the areas of music instruction through scholarly research and to broaden specific aspects of the art and science of teaching music through study of established practices and new trends.

Admission Requirements

Unconditional admission to the M.S. program requires the student to have a bachelor's degree from a fully 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 25 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 32. If the GPA is between 2.0 and 2.24, the MAT score must be at least 39. 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 Education 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 semester hours of graduate course work, including MUS 512 Thesis Writing or MUS 602 Project Writing. The degree also requires a comprehensive written examination and a final oral examination; the examinations cover music theory, music history, conducting, and the major performance area.

Students must complete all of Core A (Education) and Core B (Music). The remaining hours are to be elected from Groups I, II, and III, but at least one course must be elected from each group.

1. Required Courses

A. Professional Education Core: 12 hours

EDAD 502	Philosophy of and Introduction to School Administration	3
EDAD 503	Supervision and Improvement of Instruction	3
EDAD 511	Research and Statistics in Education	3
EDCI 526	Philosophy of Education	3

B. Core Courses in Music: 11 or 13 hours

MUS 500	Introduction to Graduate Study in Music Education	3
MUS 512 or	Thesis Writing or	4
MUS 602	Project Writing	2
MUS 525	Seminar in Music Education	3
MUS 532	Theory Review	3

2. Electives in Music and/or Music Education: 10 to 14 hours with permission of advisor

Group I: Music Education (one course)

MUS 051	Applied Music	2
MUS 501	Advanced Vocal Methods	3
MUS 506	Psychology of School Music Teaching	3
MUS 510	Instrumental Methods and Materials	3
MUS 524	Band Pageantry	3
MUS 527	Supervision of School Music	3

GROUP II: Music Theory (one course)

MUS 528	Physics of Music	3
MUS 534	Harmonic Counterpoint	3
MUS 552	Special Topics	3

GROUP II: Musicology (one course)

MUS 507	The Symphony	3
MUS 508	The Opera	3
MUS 509	Twentieth-Century Music	3

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

MUS 051. APPLIED MUSIC. (2) Graduate study covering standard literature, technical proficiency, and performance trends on one's instrument or in voice. MUS 051A is Fifth-Year Piano and MUS 051B is Fifth-Year Voice. Prerequisite: audition.

MUS 500. INTRODUCTION TO GRADUATE STUDY IN MUSIC EDUCATION. (3) A concentrated survey of bibliographical material, current periodical literature, library resources, and research techniques applicable to graduate study in music education. Required of all degree candidates. Three lectures.

MUS 501. 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. Three lectures.

MUS 506. 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, executant factors in music education, evaluation, tests, and measurements. Three lectures.

MUS 507. THE SYMPHONY. (3) An historical background of the growth and development of the modern symphony orchestra, along with a critical study of symphonic literature.

MUS 508. 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. Three lectures.

MUS 509. 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.

MUSIC 510. INSTRUMENTAL METHODS AND MATERIALS. (3) A detailed study of instrumental problems met in public schools: methods, materials, and problems or organization. Discussion of financing, instrument testing, storage and repair, rehearsal techniques, and other problems relating to the work of the instrumental director. Three lectures.

MUS 512. 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.

MUS 524. 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. Three lectures.

MUS 525. 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. Three lectures.

MUS 527. 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. Three lectures.

MUS 528. PHYSICS OF MUSIC. (3) Theoretical and applied consideration of sound production and promulgation, the tempered scale and other scales, the acoustical bases of wind and string instruments, the analysis of complex tones produced by the human voice and certain wind instruments.

MUS 532. 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. Three lectures.

MUS 534. HARMONIC COUNTERPOINT. (3) An intensive study of the works of the Baroque Era employing contrapuntal techniques. Three lectures.

MUS 552, 552A, 552B. 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.

MUS 602. 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

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

Darryl G. Nettles, Assistant 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

Ralph R. Simpson, Professor and Department Head
B.S., 1952, Alabama State University; M.A., 1957, Columbia University; Ph.D., 1964, Michigan State 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, and analytical) of the Graduate Record Examination. The minimal requirements for unconditional admission include a bachelor's degree from a fully 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 501	Introduction to Number Theory	3
MATH 502	Abstract Algebra	3
MATH 505	Intermediate Analysis	3
MATH 506, 507	Linear Algebra I, II	3,3
MATH 508	Geometry	3
MATH 509, 510	Advanced Calculus I, II	3,3
MATH 512	Thesis	4

Electives: 9 hours, with permission of the advisor

MATH 573, 574	Logic I, II	3,3
MATH 575	History of Mathematics	3

Other electives: All 500- and 600-level mathematics courses (except MATH 571); graduate courses in statistics, physics, computer science (except CS 500, 501, and 505); 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 501, 502, 505, 506, 507, 508, 509, 510, 571; CS 500, 501, and 505; and STAT 501, 502, and 507 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 512	Thesis	4
MATH 531	Topology I	3
MATH 551	Real Analysis I	3
MATH 553	Complex Analysis I	3
MATH 564	Modern Algebra I	3

At least two of the following courses:

MATH 532	Topology II	3
MATH 552	Real Analysis II	3
MATH 554	Complex Analysis II	3
MATH 565	Modern Algebra II	3

Suggested Electives: 15 hours with permission of advisor

MATH 556, 557	Differential Equations I, II	3,3
MATH 561, 562	Linear Spaces I, II	3,3
MATH 573, 574	Logic I, II	3,3
MATH 590	Special Topics	3-6
MATH 651, 652	Functional Analysis I, II	3,3
MATH 664, 665	Group Theory I, II	3,3
MATH 667, 668	Combinatorial Analysis I, II	3,3
CS 561, 562	Mathematical Modeling I, II	3,3
CS 643, 644	Numerical Analysis and Approximation Theory I, II	3,3
STAT 521, 522	Statistical Methods I, II	3,3
STAT 621	Analysis of Categorical Data	3
STAT 622	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 501. 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 164 (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 502. ABSTRACT ALGEBRA. (3) An introduction to the properties of groups, rings, integral domains, and fields. Prerequisites: MATH 164 (Calculus II) and 501, 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 505. 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 164 (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 506. LINEAR ALGEBRA I. (3) Homogeneous and non-homogeneous systems, matrix algebra, determinants, vector spaces and sub-spaces, bases, linear transformations, and rank. Prerequisite: MATH 164 (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 507. LINEAR ALGEBRA II. (3) A continuation of MATH 506. Topics include orthogonal bases, linear transformations, and similarity theory. It is strongly recommended that MATH 506 and 507 be taken sequentially. Prerequisite: MATH 506 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 508. GEOMETRY. (3) Brief review of Euclidean geometry with further topics, including the non-Euclidean, projective, and fractal geometries. Prerequisite: MATH 164 (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 509, 510. 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 351 (Intermediate Analysis), 505, and 506, 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 512. 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 531, 532. TOPOLOGY I, II. (3, 3) First semester: homeomorphisms, connectedness, compactness, metric spaces, normal spaces, Urysohm's lemma, Tietze's theorem, separation axioms, product topology, quotient spaces. Second semester: an introduction to homotopy theory and algebraic topology. Prerequisites: MATH 351 (Intermediate Analysis), or permission of the GMCC. MATH 531 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 551, 552. REAL ANALYSIS I, II. (3, 3) Continuous functions, uniform convergence, measure and integration, Lebesque measure and integrals, convergence theorems, Lp-spaces, Banach spaces, differentiation, Radon-Nikodym theorem, Fubini's theorem. Prerequisite: MATH 442 (Advanced Calculus II) or permission of the GMCC. MATH 551 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 553, 554. 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 442 (Advanced Calculus II) or permission of the GMCC. MATH 553 required of all candidates for the degree with the mathematics (M) emphaisis.

MATH 556, 557. DIFFERENTIAL EQUATIONS I, II. (3, 3) First- and second-order equations, general theory of linear nth-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 or ENGR 303 (Applied Mathematics), and MATH 361 (Linear Algebra I), or permission of the GMCC.

MATH 561, 562. 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 362 (Linear Algebra II) and 364 (Abstract Algebra), or permission of the GMCC.

MATH 564, 565. MODERN ALGEBRA I, II. (3, 3) Equivalence relations, mappings, groups, rings, fields, polynomial rings, modules, vector spaces, and Galois theory. Prerequisites: MATH 321 (Introduction to Number Theory), 361 (Linear Algebra I), and 364 (Abstract Algebra), or permission of the GMCC. MATH 564 required of all candidates for the degree with the mathematics (M) emphasis.

MATH 571. 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 573, 574. 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 264 (Calculus IV) or permission of the GMCC.

MATH 575. 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 264 (Calculus IV) or permission of the GMCC.

MATH 590. 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 651, 652. FUNCTIONAL ANALYSIS I, II. (3, 3) Topological spaces, Hahn-Banach theorem, uniform-boundedness theorem, closed-graph theorem, Lp-spaces, compact operators, Banach algebras, spectral theory of self-adjoint operators. Prerequisite: MATH 552 or permission of the GMCC.

MATH 664, 665. GROUP THEORY I, II. (3, 3) Permutation groups, adelian groups, Sylow theorems, free groups, lattices, solvable groups, commutators, and group representations. Prerequisite: MATH 565 or permission of the GMCC.

MATH 667, 668. 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 362 (Linear Algebra II) and 364 (Abstract Algebra), or permission of the GMCC.

STATISTICS (STAT)

STAT 501, 502. 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, nonparametric statistics. Prerequisites: MATH 164 (Calculus II) and CS 222 (Computer Programming in PASCAL), or permission of the GMCC. Neither course may be applied to the degree with the mathematics (M) emphasis.

STAT 507. 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 164 (Calculus II) and CS 222 (Computer Programming in PASCAL), or permission of the GMCC. Course may not be applied to the degree with the mathematics (M) emphasis.

STAT 521. 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 502 or permission of the GMCC.

STAT 522. 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 521 or permission of the GMCC.

STAT 621. 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 522 or permission of the GMCC.

STAT 622. 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 621 or permission of the GMCC.

GRADUATE FACULTY

Mahmoud Anabtawi, Assistant Professor
B.S., 1991, Yarmouk University (Jordan); M.S., 1994, Tennessee State University; Ph.D., 1998, University of Texas

Anjan Biswas, Assistant Professor
B.Sc., 1986, St. Xaviers College (India); M.Sc., 1988, M.Phil., 1989, University Calcutta (India); M.A., 1993, Ph.D., 1998, University of New Mexico

Colette J. Calmelet-Eluhu, Associate Professor
Licencie en Sciences, 1979, Maitrise, 1980, Universite des Sciences et Techniques, Montpellier (France); M.S., 1987, Ph.D., 1987, Vanderbilt University

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

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

George K. Yang, Assistant 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 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

SOC 500	Rural Sociology	3
SOC 514	Fundamentals of Sociology	3
SOC 515	Current Perspectives in Urban Sociology	3
SOC 516	Urban Community Life	3
SOC 518	Complex Organization	3
SOC 520	Educational Sociology	3
SOC 524	Advanced Social Psychology	3
SOC 528	Seminar in Cultural Anthropology	3
SOC 530	Social Movements	3
SOC 590	Selected Topics in Sociology	3
SOC 600	Sociology of Organizations	3
SOC 603	Political Sociology	3
SOC 606	Medical Sociology	3
SOC 620	Advanced Educational Sociology	3

DESCRIPTION OF COURSES

SOC 500. 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.

SOC 514. 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.

SOC 515. CURRENT PERSPECTIVES IN URBAN SOCIOLOGY. (3) Current thinking and research on urban life.

SOC 516. URBAN COMMUNITY LIFE. (3) The mechanics and dynamics of the urban environment, including education, the family, politics, and other institutions.

SOC 518. COMPLEX ORGANIZATION. (3) The structure and function of formal institutions, and the sociological perspective on their potential.

SOC 520. EDUCATIONAL SOCIOLOGY. (3) An analysis of the forces which are at work in educational systems. Minority issues in education are a focus.

SOC 524. ADVANCED SOCIAL PSYCHOLOGY. (3) The systematic interpretation of the behavioral and mental processes of individuals within social contexts.

SOC 528. 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.

SOC 530. SOCIAL MOVEMENTS. (3) A study of the often dramatic ways that groups have changed the structure of their societies.

SOC 590. SELECTED TOPICS IN SOCIOLOGY. (3) The opportunity to pursue focused studies on areas not covered by the regular course offerings.

SOC 600. SOCIOLOGY OF ORGANIZATIONS. (3) A course which focuses on social characteristics which determine organizational structure and promote organizational change. The developmental approach is used.

SOC 603. 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.

SOC 606. 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.

SOC 620. 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); Th.D., 1986, Regis College and University of Toronto; Ph.D., 1974, University of Notre Dame

Baqar A. Husaini, Professor
B.A., 1957, Lucknow University (India); M.A., 1968, Ph.D., 1972, Wayne State University

Mahgoub E. Mahmoud, Assistant Professor
B.A., 1971, University of Cairo (Sudan); H.D.S.W., 1975, University of Khartoum (Sudan); M.A., 1981, Ph.D., 1983, Brown University

Oscar Miller, Jr., Associate Professor and Head
B.A., 1986, Murray State University; M.A., 1989, Ph.D., 1993, Vanderbilt University

Ernest C. Rhodes, Professor
B.S., 1957, Tennessee State University; M.A., 1964, Fisk University; M.A., 1971, Ph.D., 1977, University of Pittsburgh

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 Ph.D. degree with a major in public administration 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.

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 private agencies. The MPA program 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, the modern administrator must learn such skills 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. Applicants 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 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.

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 semester 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. 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 or non-profit 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

PA 611	Statistics for Public Administrators	3
PA 613	Research Methods in Public Administration	3
PA 615	Information Technology in the Public Sector	3
PA 621	Seminar in Public Administration	3
PA 623	Seminar in Fiscal Management: Public Budgeting	3
PA 631	Seminar in Organization Theory	3
PA 641	Seminar in Policy Analysis	3
PA 649	Seminar in Politics of Administration	3
PA 650	Internship in the Public Service (unless student is exempted) -	6 hours

Concentration or Elective Courses - 12 hours

MAJOR: HEALTH ADMINISTRATION AND PLANNING

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:

PA 611 Statistics for Public Administrators (3)
PA 613 Research Methods in Public Administration (3)
PA 655 Epidemiology (3)

Electives include:

PA 651 Management of Health Agencies (3)
PA 652 Health Policy in the U.S. (3)
PA 653 Topics in Administration of Health and Human Services Programs (3)
PA 654 Planning and Problem Solving in Health Services (3)

The 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 include 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.

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 PA 713, in which a major research design must be prepared, and PA 714, 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's Dissertation Committee has approved the student's dissertation prospectus.

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 PA 811 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

PA 713	Research Methodology and Applied Quantitative Techniques	3
PA 714	Statistical Computer Application in Public Administration	3

Doctoral Core - 15 hours

PA 700	Theory and Practice of Public Administration	3
PA 722	Administrative Management	3
PA 723	Public Budgeting II	3
PA 731	Public Organization Theory	3
PA 741	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

PA 611. 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.

PA 612. STATISTICS FOR PUBLIC ADMINISTRATORS II. (3) Prerequisite 611. Continuation of 611.

PA 613. 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.

PA 615. 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.

PA 621. SEMINAR IN PUBLIC ADMINISTRATION. (3) This seminar surveys public administration theory, approaches to public management and contemporary problems in public administration. Required for MPA.

PA 622. SEMINAR IN ADMINISTRATIVE LAW. (3) This seminar reviews legal considerations that affect administrative decision-making, regulations and management in government organizations.

PA 623. 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.

PA 624. 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.

PA 625. 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.

PA 626. 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.

PA 627. 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.

PA 629. 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.

PA 631. 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.

PA 632. 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.

PA 633. SEMINAR IN PUBLIC MANAGEMENT. (3) The seminar examines selected problems in public management.

PA 636. SEMINAR IN ORGANIZATIONAL BEHAVIOR. (3) This seminar is a study of organizational behavior as a product of interactions between and among organizational members.

PA 639. 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.

PA 641. 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.

PA 643. 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.)

PA 644. SEMINAR IN URBAN ADMINISTRATION . (3) This seminar is an analysis of political institutions and administrative processes in metropolitan areas.

PA 647. SEMINAR IN TENNESSEE GOVERNMENT. (3) This seminar is an intensive analysis of selected governmental problems in Tennessee.

PA 648. 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.

PA 649. 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.

PA 650. 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.

PA 651. 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.

PA 652. 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.

PA 653. 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.

PA 654. 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.

PA 655. 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.

PA 656. 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 construction on government operations and service delivery, as well as the changing role of procurement officers.

PA 660. INDEPENDENT READING IN PUBLIC ADMINISTRATION. (1-3) Selected topics are examined under an arrangement between students and an instructor. Permission of the instructor is required prior to registering for this course.

PA 661. 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.

PA 663. 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.

PA 670. THESIS. (6)

PA 690. 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.

PA 691. 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.

PA 692. 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.

PA 693. 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.

PA 694. SPECIAL TOPICS IN PUBLIC ADMINISTRATION. (1-6) The intent of this course is to provide special study on selected topics in the area of public administration.

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.

PA 697. MARKETING FOR NON-PROFIT ORGANIZATIONS. (3) The role of marketing and promotion in strategic planning for public and non-profit agencies is examined from an applications perspective.

PA 700. 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.

PA 713. RESEARCH METHODOLOGY AND APPLIED QUANTITATIVE TECHNIQUES. (3) This seminar includes a survey of advanced topics in research design, regression, analysis of nominal and ordinal data, and contingency table analysis. Required for Ph.D.

PA 714. STATISTICAL COMPUTER APPLICATION 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.

PA 722. SEMINAR IN ADMINISTRATIVE MANAGEMENT. (3) This seminar emphasizes management tools as applied to public institutions. Required for Ph.D.

PA 723. PUBLIC BUDGETING II. (3) This seminar addresses advanced topics in public budgeting. Required for Ph.D.

PA 731. 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.

PA 741. 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.

PA 811. 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

Sangho Moon, Assistant Professor
B.S., 1991, Seoul National University; M.S., 1999, University of Wisconsin-Madison; Ph.D., 2001, University of Wisconsin-Madison

Ann-Marie Rizzo, Professor and Director
B.A., 1969, Ithaca College; M.A., 1971, Ph.D., 1974, Syracuse 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, Associate Professor and Coordinator
B.S., 1985, University of Khartoum; M.P.A., 1988, Arkansas State University; Ph.D., 1994, Florida Atlantic University

Rodney E. Stanley, Assistant Professor
B.S., 1995, Tennessee Temple University; M.P.A., 1997, University of Tennessee at Chattanooga; Ph.D., 2001, Mississippi State University

A. Robert Thoeny, Professor
B.S., 1957, United States Naval Academy; M.S., 1963, Ph.D., 1968, University of Wisconsin (Madison)

SCHOOL OF AGRICULTURE AND CONSUMER SCIENCES

SCHOOL OF AGRICULTURE AND CONSUMER SCIENCES

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DEPARTMENT OF AGRICULTURAL SCIENCES

Constantine L. Fenderson, Ph.D., PAS, Dpl.ACAN, Department Head
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MAJOR: BIOLOGICAL SCIENCE

DEGREE: DOCTOR OF PHILOSOPHY (Ph.D.)

MAJOR: AGRICULTURAL SCIENCES

DEGREE: MASTER OF SCIENCE (M.S.)

CONCENTRATIONS:

I. Agribusiness
II. Agricultural Education
III. Animal Science
IV. Plant Science

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 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 (4) credit hours. The candidate for the degree must complete twelve (12) credit hours of core courses: AGSC 506, AGSC 511, AGSC 512, AGSC 561-562; 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 Sciences 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.

MAJOR: AGRICULTURAL SCIENCES

DEGREE: MASTER OF SCIENCE (M.S.)

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 25 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 32 on the MAT or 2.00-2.24 GPA and a minimum pre-admission test score of 1000 on the GRE or 39 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 511), must have a thesis guidance committee appointed, and must be advanced to candidacy before enrolling in Thesis Writing (AGSC 512).

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.

PROGRAMS OF STUDY

Core Courses, All Concentrations - 12 hrs.

AGSC 506	Statistics for Res. Workers	3
AGSC 511	Research Methods	3
AGSC 512	Thesis Writing	4
AGSC 561-562	Seminar	1, 1

CONCENTRATION I: AGRIBUSINESS REQUIRED COURSES - 12 HRS. MINIMUM

AGSC 508	Agribusiness Management and Market Analysis	3
AGSC 509	Food and Fiber Industry Economics and Policy	3
AGSC 510	Environmental, Resource Economics and Management	3
AGSC 530	Decision-Making in Agribusiness Quantitative Appl.	3
AGSC 531	International Agricultural Trade and Marketing	3
AGSC 533	Agribusiness Strategy	3

Electives - 6 hrs. minimum with the approval of the advisor and department head.

BISE 502	Managerial Communication	3
BIS 637	Seminar in Information Systems	3
EC 620	Economic Development	3
MG 612	Seminar in Managerial Problems	3
MG 609	International Management	3
EC 611	Managerial Economics	3
MG 601	Organizational Theory	3
AGSC 504	Program Planning and Evaluation in Vocational Education	3
AGSC 505	Special Problems in Vocational Education	3
AGSC 515	Livestock Management	3
AGSC 518	Soil Classification	3

CONCENTRATION II: AGRICULTURAL EDUCATION REQUIRED COURSES - 12 HRS. MINIMUM

AGSC 501	Federal Relations to Vocational Education	3
AGSC 502	Occupational Studies in Vocational Education	3
AGSC 503	Organization and Vocational Education	3
AGSC 504	Program Planning and Evaluation in Vocational Education	3
AGSC 505	Special Problems in Vocational Education	3

Electives - 6 hrs. maximum with the approval of the advisor and department head.

AGSC 508	Agribusiness Management and Market Analysis	3
AGSC 509	Food and Fiber Industry	3
AGSC 510	Environmental Resource Economics	3
AGSC 514	Special Problems in Animal and Poultry Science	3
AGSC 515	Livestock Management	3
AGSC 522	Plant Growth Substances	3
AGSC 526	Soil and Plant Analysis	3
EDCI 526	Philosophy of Education	3
EDCI 527	Advanced Social Studies	3
PSY 543	Advanced Educational Psychology	3

CONCENTRATION III: ANIMAL SCIENCE REQUIRED COURSES - 12 HRS. MINIMUM

AGSC 513	Animal Nutrition	3
AGSC 514	Special Problems in Animal and Poultry Science	3
AGSC 515	Livestock Management	3
AGSC 516	Animal Genetics and Breeding	3
AGSC 517	Advanced Poultry Production and Management	3

Electives - 6 hrs. maximum with the approval of the advisor and department head.

AGSC 509	Food and Fiber Industry	3
AGSC 510	Environmental Resource Economics	3
AGSC 518	Soil Classification	3
AGSC 522	Plant Growth Substances	3
AGSC 526	Soil and Plant Analysis	3

CONCENTRATION IV: PLANT SCIENCE REQUIRED COURSES - 12 HRS. MINIMUM

AGSC 518	Soil Classification	3
AGSC 519	Plant Breeding	3
AGSC 522	Plant Growth Substances	3
AGSC 523	Advanced Propagation of Horticultural Plants	3
AGSC 524	Advanced Pomology	3
AGSC 526	Soil and Plant Analysis	3

Electives - 6 hrs. maximum with the approval of the advisor and department head.

AGSC 509	Food and Fiber Industry	3
AGSC 510	Environmental Resource Economics	3
AGSC 513	Animal Nutrition	3
AGSC 515	Livestock Management	3
AGSC 516	Animal Genetics and Breeding	3

MAJOR: BIOLOGICAL SCIENCE

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 (23 hours minimum of electives set by the student's research advisory committee), enroll in Graduate Seminar (BIO 501, 502) or the Seminar in Biology every semester (BIO 701, 702), 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

BIO 510	Literature and Methods in Research	3
BIO 518	Cell Biology	3
BIO 610	Frontiers in Molecular Science	3
BIO 712	Molecular Biology	3
CHEM 541, 542	Advanced Biochemistry I, II	6
CHEM 560	Spectroscopic Methods in Chemistry	3
STAT 521	Statistical Methods I	3

After Admission to Candidacy: 51 Hours

Electives		23
BIO, 501, 502	Graduate Seminar I, II	1, 1
BIO 701, 702	Seminar in Biology I, II	1, 1
BIO 811	Dissertation Research	24

Graduate Elective Courses

AGSC 516	Animal Genetics and Breeding	3
AGSC 519	Plant Breeding	3
AGSC 701	Advancements In Agricultural Biotechnology	3
AGSC 702	Economic, Regulatory and Ethical Issues in Biotechnology	3
AGSC 703	Gene Expression and Regulation In Higher Plants	3
AGSC 704	Plant Tissue Culture Methods and Applications	3
AGSC 705	Biotechnology in Animal Reproduction	3
AGSC 706	Advanced Soil Technology	3
AGSC 707	Molecular Genetics Ecology	3

COURSE DESCRIPTION

AGSC 501. 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 502. 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 503. 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 504. 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 505. SPECIAL PROBLEMS IN VOCATIONAL EDUCATION. (3) Students will be allowed to select a problem of interest, conduct and exhaustive literature search and present findings in written form. Discussion of progress will prevail during class periods.

AGSC 506. 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 508. 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 509. 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 510. 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 511. 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 512. 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 513. 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 514. 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 515. 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 516. 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 index, importance of pedigree and methods of estimating heritability.

AGSC 517. 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 518. 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 220, 423. Two lectures and one laboratory.

AGSC 519. 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 120. Three lectures.

AGSC 522. 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 523. 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 524. 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 526. 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 530. 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 531. 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 533. 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 561-562. GRADUATE SEMINAR IN AGRICULTURAL SCIENCES. (1-1) Critical review of current literature in Agricultural Sciences. Required of all M.S. graduate students.

AGSC 701. 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 (AS 301).

AGSC 702. 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 703. 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 519 or BIO 511.

AGSC 704. 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 705. 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 706. 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 220, 423; Basic Chemistry and Calculus.

AGSC 707. 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 and Coordinator B.S., 1969, Tuskegee Institute; M.S., 1972, Ph.D., 1974, Michigan State University

Surendra Singh, Professor B.S., 1963, M.S., 1965, Agra University; Ph.D., 1972, Pennsylvania State University

DEPARTMENT OF FAMILY AND CONSUMER SCIENCES

Gearldean Johnson, Ed.D.,
Coordinator and Head
Office: 107 Frederick S. Humphries Family and Consumer Sciences and Nursing Education Complex
(615) 963-5601

MAJOR: FAMILY AND CONSUMER SCIENCES

DEGREE: MASTER OF ARTS IN EDUCATION (M.A.ED.)

OBJECTIVES

The learner will be able to:

1. Demonstrate excellence in instruction.
2. Make use of theoretical models in education and research.
3. Demonstrate sound professional beliefs.
4. Make intelligent use of resources in education and the instructional area.
5. Demonstrate ability to improve the quality and availability of community services which enrich family life.
6. Demonstrate competence in research.
7. Demonstrate an intellectual curiosity.
8. Empower consumer and families to take action on perennial problems confronting families.

The Department of Family and Consumer Sciences offers the Master of Arts in Education. The degree program is designed for those in or preparing for professional careers in teaching, supervision, administration, research and community service. Courses are flexible to meet the needs of family and consumer sciences professionals working in formal or informal teaching positions in: nutrition and consumer education, Cooperative Extension, preschool, middle, junior and senior high schools, and post secondary institutions.

Admissions Requirements

In addition to requirements set forth by the Graduate School, students may have an undergraduate background in the area of family and consumer sciences (child development and family relationships, or early childhood education, or foods and nutrition/food management, or interior and fashion design, or clothing and textiles, or family and consumer sciences education). An applicant must pass one of two entrance tests (1) the Miller Analogies Test, or (2) the General Test of the Graduate Record Examination and have an undergraduate GPA of 2.5 or above. The minimum score on the Miller Analogies Test is 25; the minimum score on the Graduate Record Examination is 870 (combined verbal, quantitative and subject score). 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 32 on the MAT or 2.00-2.24 GPA and a minimum pre-admission test score of 1000 on the GRE or 39 on the MAT.

Admission to Candidacy

The candidate must be admitted to candidacy after completing at least nine hours of credit but less than fifteen hours (see Admissions, Regulations, Policies in this Catalog). A GPA of at least 3.0 is required for admission.

Degree Requirements

Candidates for the Master of Arts in Education (M.A.Ed.) degree must successfully complete a minimum of thirty-one (31) semester hours of course work including four (4) semester hours of thesis writing, nine (9) semester hours of professional education, twelve (12) semester hours of required courses in Family and Consumer Sciences Education; and six (6) semester hours of electives. The course sequence should be planned with the adviser.

PROGRAM OF STUDY

Thesis Requirements - 4 hrs.

FCS 512	Thesis Writing	4

Professional Education Core - 9 hrs.

FCS 511 or EDCI 511	Research and Statistics	3
EDCI 526	Philosophy of Education	3
PSY 543	Advanced Educational Psychology	3

Required Courses. Family and Consumer Sciences Education - 9 to 12 hrs.

FCS 501	Issues and Trends in Family and Consumer Sciences	3
FCS 502	Evaluation	3
FCS 503	Curriculum Planning and Programming	3
FCS 521	Analysis of Teaching	3
FCS 531	Workshop	3
FCS 532	Technology in Family and Consumer Sciences	3
FCS 543	Occupational Family and Consumer Sciences	3
FCS 573	Entrepreneurship in Family and Consumer Sciences	3
FCS 640	Special Problems in Family and Consumer Sciences	3

Required courses in Family and Consumer Sciences Education must be selected with the consent of the adviser.

Courses selected must include FCS 501 and 502.

***Electives. 6 to 9 hrs. with the consent of the adviser**

ECCD 532	Advanced Creative Activities	3
ECCD 560	Advanced Methods and Materials for Early Childhood Education	3
ECCD 561	Newer Trends and Issues in Early Childhood Education	3
ECCD 562	Advanced Child Development	3
ECCD 601	Theories of Child Development	3
NTR 531	Community Nutrition	3
NTR 533	Maternal and Child Nutrition	3
NTR 552	Foodsystem Management	3
NTR 553	Diet Therapy	3
NTR 581	Problems in Foods and Nutrition	3
HMGT 519	Economic Problems and Welfare of Families	3
HMGT 533	Consumer Education in High School	3

*3.0 hrs. of electives may be selected from other disciplines with the consent of the adviser.

COURSE DESCRIPTION

FCS 501. ISSUES AND TRENDS IN FAMILY AND CONSUMER SCIENCES. (3) This course covers the identification, examination, and evaluation of critical issues, theories, trends, innovations, and developments in Family and Consumer Sciences.

FCS 502. EVALUATION. (3) Types of evaluation and models will be examined and the teacher will analyze the kind of problems evaluation raises and devise appropriate solutions. Emphasis will also be on the identification, construction, use, and interpretation of instruments for appraising cognitive, affective and psychomotor objectives.

FCS 503. CURRICULUM PLANNING AND PROGRAMMING. (3) This course includes the identification and consideration of major curriculum theories, models, and designs. Emphasis is on family and consumer sciences curriculum conceptualization and building.

FCS 511. RESEARCH. (3) This course is designed to introduce the student to different methods of conducting research as well as to prepare the student for planning an original piece of research and develop a research 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 or date are included.

FCS 512. THESIS WRITING. (4) This course involves the writing of a thesis. The statement of the research problem, review of related literature, the design of the study, the collection and analysis of data, and conclusions are emphasized.

FCS 521. ANALYSIS OF TEACHING. (3) Students are provided the opportunity to examine teaching strategies. The course also includes the description and classification of verbal and nonverbal classroom behavior.

FCS 531. WORKSHOP. (3) This course is designed for students to apply theoretical principles of knowledge and discipline. Family and Consumer Sciences professionals are provided the opportunity to update or gain needed skills related to a problem or issue in Family and Consumer Sciences.

FCS 532. TECHNOLOGY IN FAMILY AND CONSUMER SCIENCES. (3) This workshop is designed to help the family consumer sciences professionals explore the impact of computers and technology on society, family, family and consumer sciences programs, and the school. How the computer developed and the implications for the future, how computers work, and selecting and using home computers are important topics covered in the course. In addition, participants will have the opportunity to gain hands-on experience with the computer, review and evaluate computer hardware and software packages, and plan programs that incorporate technology and computers.

FCS 543. OCCUPATIONAL FAMILY AND CONSUMER SCIENCES. (3) This course focuses on theory, philosophy, legislative background, program development, and research in occupational Family and Consumer Sciences, career and technical education.

FCS 558. CHILD CARE OCCUPATIONAL INTERNSHIP. (2) Students are involved in observation and on-the-job work experience in industry-related positions of child care.

FCS 560. FOOD SERVICES OCCUPATIONAL INTERNSHIP. (2) Students are involved in observation and on-the-job work experience in industry-related positions in food services.

FCS 573. ENTREPRENEURSHIP IN FAMILY AND CONSUMER SCIENCES. (3) The course is designed to assist educators with incorporating entrepreneurship into Family and Consumer Sciences programs in a variety of education settings. Emphasis is also placed on developing competencies for operating a business using Family and Consumer Sciences related skills.

FCS 640. SPECIAL PROBLEMS IN FAMILY AND CONSUMER SCIENCES. (3) An individually directed study or investigation of special problems of particular interest to the student is conducted.

ECCD 532. ADVANCED CREATIVE ACTIVITIES. (3) The focus is on the creative awareness of one's environment-understanding of each child's level of thinking and the questioning mind as goals toward which teachers should strive for all children. The philosophies of Jean Piaget and Paul Torrance are incorporated in art, music and movement, language arts, and science. Projects are required.

ECCD 560. ADVANCED METHODS AND MATERIALS FOR EARLY CHILDHOOD EDUCATION. (3) The methods of teaching the subject matter areas, such as science, mathematics, social studies, art and music, for the young child are analyzed and discussed. Students plan by stating objectives and activities to implement these objectives.

ECCD 561. NEWER TRENDS AND ISSUES IN EARLY CHILDHOOD EDUCATION. (3) Recent developments in the field of early childhood education, current theoretical bases for programs, and new directions required by society today are analyzed. The practical implications of these developments and directions are discussed. Students become knowledgeable about newer trends and issues in the United States and other parts of the world.

ECCD 562. ADVANCED CHILD DEVELOPMENT. (3) The development of the child from birth through middle childhood is analyzed. Emphasis is put on recent research findings in child rearing practices. Students will be able to comprehend in detail the needs of children they will be working with in the classroom or at home.

ECCD 601. THEORIES OF CHILD DEVELOPMENT. (3) Basic theories of child development are analyzed in this course. The practical uses of these theories in teaching are discussed. Students develop a personal philosophy of education derived from a theory or a combination of theories.

NTR 531. COMMUNITY NUTRITION. (3) This is a course covering nutrition problems and practices in the community, including nutrition programs of the local, state, and federal agencies, and the preparation of materials for community nutrition programs. Prerequisite: a nutrition course.

NTR 533. MATERNAL AND CHILD NUTRITION. (3) This course is an advanced study of nutrition as it relates to children from prenatal life through adolescence.

NTR 552. FOOD SYSTEMS MANAGEMENT. (3) This advanced course in food systems administration concentrates on the special issues of concern to food service managers, including computer applications and program selection, cost control, personnel selection, training and supervision, and legal aspects of food service. Each student also chooses a special topic for further investigation.

NTR 553. DIET THERAPY. (3) This course includes study of the modifications of the normal diet in treatment of disease with emphasis on application. Prerequisites: Advanced Nutrition, Biochemistry, Anatomy and Physiology.

NTR 581. PROBLEMS IN FOODS AND NUTRITION. (3) This course is designed for individually or group directed study and investigation involving techniques used in foods and nutrition research, and investigation of current topics of interest in the field.

HMGT 519. ECONOMIC PROBLEMS AND WELFARE OF FAMILIES. (3) A study is made of some of the factors related to changes in the economic welfare of families in America. Emphasis is placed on distribution, national income, prices, and specialization as they affect the family income.

HMGT 553. CONSUMER EDUCATION IN THE HIGH SCHOOL. (3) New and innovative techniques in consumer education for youth below the college level are examined in this class.

FAMILY AND CONSUMER SCIENCES FACULTY

Sandria Godwin, Associate Professor
B.S., 1971. M.S., 1973. Ph.D., 1981, Kansas State University

Gearldean Johnson, Professor and Head
B.S., 1966. Tennessee State University; M.S., 1970, Ed.D., 1975, University of Tennessee/Knoxville

Beth Quick, Assistant Professor
B.S., 1989, M.Ed., 1990, Samford University; Ed.D., 1996, Peabody College of Vanderbilt University

Troy Wakefield, Professor and Dean
B.S., 1970. Tennessee State University; M.S., 1973. Ph.D., 1979, University of Tennessee/Knoxville

SCHOOL OF ALLIED HEALTH PROFESSIONS

SCHOOL OF ALLIED HEALTH PROFESSIONS

Kathleen McEnerney, D.A., Dean
162 Clement Hall
(615) 963-5871

General Statement

The School of Allied Health Professions is jointly supported and administered by Meharry Medical College and Tennessee State University. The purpose of the School 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. The purposes cited are consistent with the stated missions of both Tennessee State University and Meharry Medical College.

Objectives

The objectives of the School of Allied Health Professions are as follows:

1. To develop and implement educational programs designed to produce allied 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 School and to provide these students with career counseling, academic advisement, and tutoring designed to assist them in their effort to achieve their career goals.
3. To maintain full accreditation by appropriate agencies for all programs offered by the School.
4. To recruit and maintain 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 master's degree in Speech and Hearing Science and Physical Therapy, the School of Allied Health Professions offers undergraduate degrees in the following areas:

Cardio-Respiratory Care Sciences
Dental Hygiene
Health Care Administration and Planning
Health Information Management
Medical Technology
Occupational Therapy
Speech Pathology and Audiology

DEPARTMENT OF PHYSICAL THERAPY

Gene E. Gary-Williams, Ph.D., Head
Office: 368 Clement Hall
(615) 963-7081

MAJOR: PHYSICAL THERAPY

DEGREE: MASTER OF PHYSICAL THERAPY (M.P.T.)

ACCREDITATION

The Commission on Accreditation in Physical Therapy Education (CAPTE) of the American Physical Therapy Association has mandated that all baccalaureate physical therapy programs convert to an entry level post-baccalaureate professional degree program by the year 2002 to be considered for accreditation. The Department of Physical Therapy has successfully completed the application process to gain candidate for accreditation status in preparation to offer the Master of Physical Therapy (MPT). The Department will accept an initial class to enter in summer, 2002. Information concerning the admissions process and related issues may be received from the Department's Office at (615) 963-5881 or via e-mail – TCONLEY@TNSTATE.EDU. Interested students are invited to call, mail or visit the Department to solicit all information preparatory for admission to the MPT program.

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 Speech and Hearing Science major has a curriculum that leads to certification by the American Speech-Hearing-Language Association (ASHA), to teaching certification in public schools, and to licensure from the State of Tennessee and other states.

The curriculum requires approximately two years of full-time study beyond an acceptable Bachelor's degree. The curriculum consists of forty-seven (47) semester hours of required courses.

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 the Teacher Education Program; 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 one hundred (100) 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 Meharry Medical College, the public-school system, child-care centers, habilitation and rehabilitation facilities, hospitals, and health-care facilities in the Nashville-Davidson County area as well as other areas.

The Department of Speech Pathology is accredited by the Council on Academic Accreditation of the American Speech, Language, and Hearing Association.

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 March 15th 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 30.

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 25 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-seven (47) semester hours of coursework plus a comprehensive examination for the non-thesis option.

Students electing the thesis option must enroll in SPTH 512: Thesis Writing the semester in which they anticipate graduation. Additionally, students must formally enroll in practicum (SPTH 551 or SPTH 571) each semester in residence and must obtain the minimum requirement of clock hours for certification by ASHA.

PROGRAM OF STUDY

Core Courses: Forty-seven (47) Hours

SPTH 511	Methods of Research	2
SPTH 512	Thesis Writing (Optional)*	4
SPTH 550	Regional Dialect and Urban Language Studies	3
SPTH 551	Advanced Clinical Speech Language Practicum	1-6
SPTH 571	Advanced Clinical Practicum in Audiology	1-6
SPTH 574	Advanced Audiology	3
SPTH 575	Seminar in Aural Rehabilitation	3
SPTH 655	Seminar in Language Development	3
SPTH 656	Studies in Language Disorders	3
SPTH 553	Neuroanatomy and Neurophysiology of Speech and Hearing	3
SPTH 640	Neurogenic (Motor) Speech Disorders	3
SPTH 558	Voice Disorders	3
SPTH 552	Studies in Articulation	3
SPTH 557	Anatomy and Physiology of Speech	3
SPTH 563	Adult Aphasia	3
SPTH 653	Seminar in Stuttering	3
SPTH 654	Studies in Organic Speech Disorders	3
SPTH 525	Methods in Public School Setting (Optional)**	3

* Required only for students writing thesis
** Required for students desiring teaching certification

COURSE DESCRIPTION

SPTH 511. 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 512. 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 525. 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 550. 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 551. 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 552. 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 553. 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 form damage to specific areas of the central nervous system with emphasis on speech, language, and auditory function.

SPTH 556. 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 557. 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 558. 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 560. 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 563. ADULT APHASIA. (3) Study of the characteristic nature (etiology and symptomatology) of aphasic disturbances, including principles of evaluation, treatment and management.

SPTH 567. 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 571. 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 574. 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 575. 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 580. 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 640. 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 642. 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 643. 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 642.

SPTH 653. 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 654. 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 655. 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 656. 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

Sheila Heard, CCC/SLP, B.S., 1984; M.S., 1987, Tennessee State University

Valeria Roberts Matlock, CCC/A, B.S., 1983; M.Ed., 1986, Tennessee State University

Brenda McClellan, CCC/SLP, B.S., 1991; M.Ed., 1992, Tennessee State University

Graduate Faculty

Faud Abdulla, Associate Professor
B.Sc., 1983, M.Sc., 1987, Kuwait University; Ph.D., 1993, University of London

G. Pamela Burch-Sims, CCC/A, Associate Professor and Assistant Dean
B.S., 1977, Hampton Institute; M.A., 1978, University of Tennessee; Ph.D., 1993, Vanderbilt University

James C. Cantrell, CCC/SLP, Associate Professor
A.B., 1973, Catawba College; M.A., 1975, M.A., 1977, Marshall University; Ph.D., 1986, The Ohio State University

Deborah A. Edmondson, P.T., Assistant Professor
B.S., 1977, University of Tennessee; M.S., 1994, College of St. Francis; Ed.D., 2001, Tennessee State University

Iris A. Johnson, CCC/SLP, Assistant Professor
B.A. 1991, M.A., 1995, South Carolina State University; Ph.D., 1999, University of Memphis

Harold R. Mitchell, CCC/SLP, Professor and Head
B.S., 1962, South Carolina State College; M.S., 1964, University of Denver; Ph.D., 1972, The Ohio State University

Gene Gary-Williams, Professor and Head
A.B., 1956, Spelman College; M.A., 1958, State University of Iowa; Ph.D., 1986, University of Maryland

COLLEGE OF BUSINESS

COLLEGE OF BUSINESS

Tilden Curry, Ph.D., Dean
Office: K-26 Williams Campus
(615) 963-7121

G. Bruce Hartmann, Ph.D., MBA Coordinator
Office: Suite K, Avon Williams Campus
(615) 963-7121

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 that compete successfully in the global marketplace, a strong teaching and research faculty, and important outreach services to the business community.

MISSION

Our mission is to provide an academic program of overall high quality with a value added approach to student learning and a synergistic combination of teaching, research, and service focused on contemporary business operations and small business development.

PROGRAM OBJECTIVES:

This program is designed to serve both full-time and part-time students, with particular emphasis on meeting the needs of working adults who desire to improve their management capabilities. The program structure blends a number of functional business disciplines into a cohesive unit of core courses which encompass theoretical, applied, quantitative, and behavioral concepts of management that apply to decision making in all organizations in business, government, and the community. Elective courses may be chosen to provide specialized preparation for the profession. (The MBA program of the College of Business is accredited by AACSB International—The Association for the Advancement of Collegiate Schools of Business.)

The specific objectives are:

1. to promote the intellectual growth of the individual student;
2. to develop competence in the administration of business, government, and service organizations;
3. to stimulate interest in improving the economic performance of these institutions;
4. to develop the kinds of research skills necessary to deal with economic, social, moral, and political problems.

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.

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 college Algebra and 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.
2. 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.
3. 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.
4. Candidates must pay a diploma fee and 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	9	4
Economics Principles & Business Finance	9	4
Management & Marketing Principles	6	4
Legal Environment of Business	3	-
Algebra & Calculus (May be waived)	6	-
	39	16 plus Math and Legal Environment of Business

MBA Core Requirements - 25 hours

AC 601	Managerial Accounting/Controllership	3
EC 611	Managerial Economics	3
FN 630	Managerial Finance	3
MG 602	Behavior In Organizations	3
MG 606	Operations Management	3
MK 605	Marketing Management	3
QM 601	Statistical Decision Making	3
MG 610	Executive Seminar Series	1
MG 611	Business Strategy & The Economic Environment	3

MBA Elective Requirements* **9**

*3 hours must be in either BIS 613, MG 601, or MG 609

Total Semester Hours **34**

Elective Courses are offered in the following areas.

Accounting
Business Information Systems
Economics
Finance
Management
Marketing
Real Estate & Urban Development

COURSE DESCRIPTIONS

ACCOUNTING

AC 500. 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.

AC 601. 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: AC 212 or AC 500.

AC 615. SEMINAR IN MANAGERIAL ACCOUNTING (3). (Formerly AC 632) Research managerial accounting tools and procedures and develop management control systems in the business environment. Prerequisite: AC 601.

AC 616. INTERNAL AUDITING (3). (Formerly AC 655) Designed to give MBA and MAcc students a working knowledge of internal auditing. Broad view of the functions and management of internal auditing. Auditing within the organization as pertaining to compliance with management procedures, adequacy of internal controls, proper use of resources, and security of technology. Prerequisites: AC 601.

AC 617. 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: AC 307, AC 601.

AC 620. ACCOUNTING INFORMATION SYSTEMS (3). Uses of information systems in tax, managerial/cost, auditing, and financial reporting processes. Evaluation of implementation alternatives. Prerequisites: AC 601.

AC 622. ACCOUNTING THEORY (3). (Formerly AC 651) Exploring the history of accounting theory and generally accepted accounting principles not covered by FASB's. Prerequisite: AC 312.

AC 624. ADVANCED AUDITING (3). (Formerly AC 638) Emphasis is placed on the student's ability to apply knowledge of audit theory and principles, and generally accepted auditing standards through the case study method. Completion of a comprehensive research paper on an auditing-related topic approved by the instructor is also required. Demonstration of knowledge of appropriate research techniques is expected. Prerequisite: AC 423.

AC 625. 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: AC 601.

AC 699. 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: AC 601 and consent of Dept. Head.

BUSINESS LAW

BL 601. LEGAL AND PROFESSIONAL ISSUES IN ACCOUNTANCY (3). Course offers in-depth review and analysis of contemporary legal and ethical issues facing industry and public accountants and their clients. Seminar format requires thorough understanding of Generally Accepted Accounting Principles, Statement of Auditing Standards, and AICPA ethics opinions. Course encompasses all types of litigation against accounting firms, including securities and employment laws. Course includes litigation support services and valuation. History of accountancy will be offered as an optional topic. Flexible course design allows focus on contemporary compelling issues. Prerequisite: BL 300

ECONOMICS

EC 500. 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. Prerequisities: AC 212 or AC 500.

EC 611. MANAGERIAL ECONOMICS. (3) Application of economic theory to business decision making; emphasis is on profit objectives, measurement and forecasting demand, and costs. Prerequisite: EC 212 or EC 500 and QM 201.

EC 612. MACROECONOMIC THEORY. (3) The key aggregate economic relationships which constitute the total economic environment in which busines decisions are formulated. Topics for consideration are macroeconomic measurement, determination of national income and output, and contemporary fiscal and monetary policy objectives and practices. Prerequisite: EC 211 or EC 500.

EC 620. ECONOMIC DEVELOPMENT. (3) A basic study of the general nature of the economic development problem, some simple theories of economic growth and underdevelopment, as well as development policies. Prerequisite: EC 212 or 500.

EC 630. SEMINAR IN LABOR ECONOMICS. (3) Examination of wage theories and policies, consideration of problems created by the presence of an organized labor movement in the American economy, and the efficacy of labor legislation. Prerequisite: EC 212 or 600.

EC 640. INTERNATIONAL ECONOMICS. (3) A basic study of international economics with special reference to the foreign exchange and market methods for minimizing foreign exchange risks to business. Prerequisite: EC 212 or 500.

FINANCE

FN 630. MANAGERIAL FINANCE. (3) Refined techniques of analysis, optimal financing decision, theory and cases in general corporate finance. Prerequisite: FN 330.

FN 640. FINANCIAL INSTITUTIONS. (3) Characteristics, allocation of funds, fund management, growth, government regulation, critical evaluation of economic performance. Prerequisite: FN 630.

FN 645. COMMERICAL BANKING. (3) Reading, cases, balance sheet management, structure, markets competition, capital adequacy, profitability, quantitative techniques of analysis, computer simulations. Prerequisite: FN 630.

FN 650. CORPORATE ASSET MANAGEMENT. (3) Reading, advanced cases in theory and practice of financial planning and management of assets, quantitative methods of analysis, capital budgeting, capital rationing, leasing, selected specialized topics. Prerequisite: FN 630.

FN 655. FINANCIAL STRUCTURE MANAGEMENT. (3) Reading, advanced cases in theory and practice of financial planning and management of liability and capital, innovative financing, optimum financing mix, valuation, mergers, quantitative techniques of analysis, selected specialized topics. Prerequisite: FN 630.

FN 660. INVESTMENTS. (3) Evaluation and selection of securities, investment decision process, value and price, analysis of companies, capital market theory. Prerequisite: FN 630.

FN 665. PORTFOLIO MANAGEMENT. (3) Analytical approaches, theory of random walks, empirical evidence, portfolio theory, capital market theory. Prerequisite: FN 630, AC 420.

MANAGEMENT

MG 500. 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.

MG 601. ORGANIZATIONAL THEORY. (3) Analysis and design of organizations and their structure. Basic organizational factors and association concepts are presented and analyzed. Included are organizational structure, design strategy, goals, environment departmentalization, and organization effectiveness. Prerequisite: MG 301 or MG 500.

MG 602. 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: MG 301 or equivalent.

MG 603. MANAGERIAL PLANNING AND CONTROL. (3) Processes of management planning and controlling: forecasting, setting standards, assuring performance. Development of complete (marketing, financial, physical environmental, etc.) long-range plans for real world business and service organizations. Emphasis on long-range corporate planning. Prerequisite: Graduate standing, completion of graduate courses in Finance, Accounting, Marketing, Management, or equivalent, or Advisor's consent.

MG 604. HUMAN RESOURCE MANAGEMENT. (3) Analysis of theories, policies, procedures, practices, and regulations relevant to attracting, retaining, and directing a competent work force. Analysis of the basic personnel function with emphasis on the fact that all managers are "personnel managers." Integration of scientific theory, procedures, instruments, and federal regulations into personnel selection, placement, and security programs. Prerequisite: MG 601.

MG 605. COMPENSATION ADMINISTRATION. (3) Research review and application of job evaluation and other methodologies as a basis for establishing and controlling equitable wage salary, and benefit programs. Included will be a review of relevant theories, methods, and practices; case analysis; review of current and pending legislation and projection of future compensation practices; and development of a comprehensive compensation plan. Emphasis on cost/benefit or program. Prerequisite: MG 601.

MG 606. 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: QM 201 or MIS 500.

MG 607. ORGANIZATION DEVELOPMENT. (3) A survey of current theory, practice, and techniques in this rapidly growing field. Emphasis on development of skills in applying negotiating skills and team building. Prerequisite: MG 602.

MG 608. THE MANAGEMENT OF CONFLICT. (3) A survey of basic theory and methods for the management of conflict in organizational settings. Emphasis on development of personal skills in application of methods. Will cover intrapersonal, interpersonal, intragroup, and intergroup conflict. Students will have the opportunity of assessing their own personal styles of handling conflict. Prerequisite: 602.

MG 609. INTERNATIONAL MANAGEMENT. (3) Analysis of operational environment of international business firms and impact of internal and external factors on managerial decisions. Readings, cases, research, and other methodology will be used. Prerequisite: MG 601.

MG 610. EXECUTIVE SEMINAR SERIES. (1) A series of seminars structured to enable students to interact with and learn first hand from senior corporate executives about current and projected trends, problems, and opportunities within a wide range of business and industry groups. Prerequisite: 12 hours of MBA core courses or consent of instructor.

MG 611. 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.

MG 612. SPECIAL TOPICS IN MANAGEMENT. (3) Research and examination of key managerial issues and theories, and their applications. Prerequisites: Twelve hours of MBA core courses, including MG 602, or consent of instructor.

MG 624-625. BUSINESS CONSULTING AND ENTREPRENEURSHIP I AND II. (6) Opportunities for consulting with small business or generating prospects and plans for new enterprises. Provides experience rating prospects and plans for new enteprises. Provides experience that extends and solidifies what is learned in the classroom and allows students trial-and-error experience in a relatively protected environment. Lectures and discussion, with emphasis on a problem-oriented environment. Lectures and discussion, but emphasis on problem solution by the student. Prerequisite: Approval of instructor.

MG 650. INDEPENDENT RESEARCH. (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

MK 605. MARKETING MANAGEMENT. (3) An analytaical, 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: EC 500 & MG 500 or EC 211-212, FN 330, MG 301, MK 301.

MK 610. DISTRIBUTION CHANNELS, STRUCTURE, AND MANAGEMENT. (3) Distribution channel's function, structure, and processes; the channel as an economic behavior system's relationship between channel members; marketing manager's viewpoint; vertical marketing systems, channel design, communication information systems. Prerequisite: MK 605.

MK 615. CONSUMER/BUYER BEHAVIOR. (3) Nature and dynamics of consumer and industrial markets and significance of these markets to marketing executives. Consumer/buyer behavior patterns with emphasis on the implications for marketing analysis and executive action. Prerequisite: MK 605.

MK 620. MARKETING RESEARCH. (3) Training in the application of scientific methods of research in marketing. Investigation and solution of problems; application of research methods to functional areas of marketing. Research concepts, methods, and techniques. Includes major research project. Prerequisite: MK 605.

MK 625. CREATIVE MARKETING STRATEGY. (3) Components of marketing strategy including the development of the marketing mix. Consideration of alternative strategies and participation in analytical process for managerial marketing decisions with a real-world case study. Prerequisite: MK 605.

MK 630. MARKETING IN NON-BUSINESS ORGANIZATIONS. (3) Survey and application of marketing concepts to non-business organizations. Applications of consumer-behavior models and such concepts as market segmentation, product differentiation, promotion mix, channel of distribution are analyzed in terms of both private and public non-business organizations. Prerequisite: MK 605 or equivalent.

MK 635. PROMOTIONAL MANAGEMENT AND STRATEGY. (3) Study of communication, theories, and concepts useful to firms in achieving promotional objectives and goals. Planning, implementing, and evaluating the firm's promotional program. Social and economic role of persuasive communication. Prerequisite: MK 605.

QUANTITATIVE METHODS

QM 601. 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: QM 201 and one computer application course or BIS 500.

QM 602. QUANTITATIVE METHODS OF BUSINESS. (3) Quantitative methods of management science with application to economic and industrial problems. Topics to be covered will be selected from the following: Decision-making under risk, inventory control, mathematical programming, queueing theory, game theory, and simulation.

REAL ESTATE AND URBAN DEVELOPMENT

RE 605. SURVEY OF REAL ESTATE PRINCIPLES. (3) Advanced discourse on the socioeconomic and legal-political framework for the development and use of real property in the United States. An examination of the specific functions and processes of various public and private participants involved in real estate use and transactions, e.g., brokers, appraisers, developers, managers, financiers, planners and elected government officials.

RE 610. PRINCIPLES OF URBAN LAND-UTILIZATION. (3) Analysis of the principles and processes of creating and controlling real property. Emphasis on policies of growth management and decision systems.

RE 620. REAL ESTATE FINANCE. (3) Mechanism of real estate finance, sources of funds, loan contracts, principles of mortgage risk analysis, role of governmental agencies. Prerequisites: RE 605 & MG 500 or MG 301, MK 301.

BUSINESS INFORMATION SYSTEMS (BIS)

BIS 500. 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.

BIS 613. 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: BIS 500 or equivalent

BIS 625. 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: BIS 500 or instructor's consent

BIS 630. 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.

BIS 637. 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.

BUSINESS INFORMATION SYSTEMS EDUCATION (BISE)

BISE 503. Managerial Communication (3). Provides opportunities for students to develop and refine communication skills needed in their roles as decision makers. Emphasis is on formal and informal channels; process and motivation; planning and work flow as impacted by communication; preparation of communication documents (training manuals, policy documents, annual reports, etc.); interpersonal relations and multicultural aspects; and technology as a communication tool.

BISE 523. Current Problems in Business Information Systems Education (3). A critical outlook at the administration, curricular, evaluative, and instructional problems facing information systems and computer educators at the secondary level and collegiate levels. The problems examined and evaluated in this course will be discerned from current research and literature in the field.

BISE 538. Directed Work Experience (3). Provides for in-service personnel to receive related-supervised work experience in education or in industry. Student must have employment related to teaching responsibilities and must complete satisfactory instructional modules required for the course.

BISE 571. Instructional Strategies and Methods in Business (3). Designed to assist the teacher with appropriate instructional strategies and methods for teaching basic business, accounting, and information systems related courses. Course coverage includes an investigation of the classroom materials, methods, current trends, as well as research in the teaching of basic business, accounting , information systems, and office technology courses.

GRADUATE FACULTY

Richard L. Banham, Associate Professor
B.S., Accounting, University of Utah, 1975; Master's, Professional Accountancy, University of Texas, 1978; Ph.D., Taxation, University of Texas, 1984; J.D., University of Texas, 1985

Augustus Bankhead, Professor and Vice-President for Academic Affairs
B.S., 1957, M.S., 1958, Tennessee State University; Ed.D., 1978, George Peabody College for Teachers

Linda Carr, Assistant Professor
B.B.A.,1978, Emory University; C.P.A. 1987, Ph.D., 1993, Georgia State University

G. Robert Cluskey, Associate Professor, Department Head/ Accounting & Business Law
B.S.,1971, Bradley University; M.S.,1978, University of Utah; D.B.A., 1994, SIU-Carbondale; CPA

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

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

G. Bruce Hartmann, Professor and Chair of Economics, Finance, Quantitative Methods
B.A., 1954, Kenyon College; M.B.A., 1958, Columbia University; Ph.D., 1974, State University of New York at Albany

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

Maxwell Hsu, Assistant Professor
B.B.A.,1990, National Cheng-Kung University; M.B.A., 1994, Sul Ross State University; D.B.A., 1999, Louisiana Tech 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

M. Alan Miller, Professor
B.S., 1960, University of Tennessee; M.B.A., 1968, Auburn University; Ph.D., 1974, University of Arkansas

Louis Miller, Professor
A.B., 1955, Sir George Williams University; Ph.D.,1960, University of Rochester

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

Stephen P. Shao, Associate Professor
B.A., 1976, University of Virginia; M.B.A., 1977, Old Dominion University; Ph.D., 1984, University of Maryland

Sharon V. Thach, Professor
B.A., 1967, Michigan State University; M.A., 1980, Southern Illinois University; Ph.D., 1987, Michigan State University

Godwin J. Udo, Professor
B.S., 1983, University of Missouri; M.Ed., 1984, University of Missouri; Ph.D., 1990, Clemson 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

Franklin B. Jones, Ed.D., Dean
Office: 118 Clay (Education) Building (615) 963-5451

Leslie J. Drummond, Ed.D., Associate Dean
112 Clay (Education) Building (615) 963-5478

Roger W. Wiemers, Ed.D., Director, Public Service
106 Clay (Education) Building (615) 963-5479

The College of Education is an academic and professional school consisting of a community of scholars, both faculty and students, engaged in a common pursuit of knowledge. The mission is to be a facilitator of learning and to prepare competent and caring practitioners with a multicultural perspective. Aware that education and learning are life-long experiences, the College addresses the needs and demands of a changing customer and society. Teaching, research and service are all part of the function of the College of Education.

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

John A. Williams, Ph.D., Director

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. Office of Teacher Education and Student Services: Rm. 106 Clay Bldg., 615-963-7614.

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 deparment 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 nine (9) hours per semester to fulfill the obligations of the assistantship.

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

1. 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.
2. Grades of "C" or lower cannot count toward the doctoral degree.

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 712 or EDCI 712, and EDAD 718 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 & Quantitative), or a minimum Miller Analogies Test (MAT) score of 44
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 Education Specialist degree may be used toward the doctorate. The advisor will recommend the appropriate Education Specialist credits to be transferred.
3. A resume or curriculum vita
4. Four (4) written recommendations indicating probable success in the program
5. Proof of the ability to write effectively
6. An acceptable interview.

*All application materials must be submitted to the Graduate School by February 15 for admission the following Summer or Fall semester.

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 704	Leadership and Interpersonal Relationships	3
EDCI 630	Multicultural Education	3
EDCI 700	Foundations of Education	3
EDAD 712	Advanced Methods of Educational Research	3
EDCI 745	Learning Theories for Educators	3
*EDAD 718	Computer Applications	3

Major Core for Each Concentration (6 Semester Hours)

EDAD 701	Theory and Principles of Ed. Adm.	3
EDAD 715	Advanced Legal Problems	3

Concentration PreK-12 Administration and Supervision (18)

EDAD 708	Internship in Adm/Supervision	3
EDAD 709	Seminar in Adm and Supervision	3
EDAD 707	Planning For Educational Change	3

Take one of the following three courses.

EDAD 702	Policy Implementation in Ed. Adm.	3
EDAD 706	Administration of Inst. Prog. And Materials	3
EDAD 720	School Personnel Administration	3

Take two of the following courses.

EDAD 705	Professional Negotiations	3
EDAD 728	Business Management & Transportation	3
EDAD 730	Communication for School Executives	3

Suggested Electives (12 Semester Hours required)

*EDAD 600 (as a required elective) must be taken before EDAD 718.

These courses should be taken outside Educational Administration. (EDAD 600 and 700 may count as two of these electives). It is suggested that EDAD 700 be taken immediately prior to or during the first semester of enrollment in EDAD 810.

Dissertation (6 - 15 hours required)

EDAD 810	Doctoral Dissertation	6-15
Minimum Required hours for the Ed.D.		60

Concentration Higher Education (18 hours required)

EDAD 617	Organization & Admin. of Higher Ed.	3
EDAD 743	Seminar in Higher Education	3
EDAD 744	Practicum in Higher Education	3
EDAD 742	Curriculum, Students, and Fac. in Higher Ed.	3

Take two (2) of the following courses:

EDAD 713	The Community College	3
EDAD 741	Diversity in Higher Education	3
EDAD 745	Economics and Finance in Higher Education	3
EDAD 746	Government Public Relations in Higher Ed.	3
EDAD 747	Topics in Higher Education	3
Suggested Electives (12 semester hours)		12

*EDAD 600 (as a required elective) must be taken before EDAD 718.

Consultation with the advisor is required when making the selection. (EDAD 600 and 700 may be used to meet six of the twelve elective hours.) It is suggested that EDAD 700 be taken immediately prior to or during the first semester of enrollment in EDAD 810.

Dissertation (6 - 15 hours required)

EDAD 810	Dissertation Writing	6-15
Total Degree Requirement		60

Once students begin the dissertation, they must register for EDAD 810 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 38.
3. A minimum G.P.A. of 3.25 on the last graduate degree.

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 614).

Required Courses 18 Hours

EDAD 600	Statistics for Research in Administration	3
EDAD 604	Leadership	3
EDAD 607	Legal Problems	3
*EDAD 608	Internship in Administration & Supervision	3
EDAD 628	Business Management and Transportation	3
EDAD 614	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 601	Theory & Principles of Educational Administration	3
EDAD 605	Professional Negotiations	3
EDAD 606	Administration of Instructional Programs	3
EDAD 609	School Plant and Facilities	3
EDAD 610	Computers in Educational Administration	3
EDAD 611	Personnel Evaluation	3
EDAD 615	Ethics in School Administration	3
EDAD 616	School Principalship	3
EDAD 625	International/Global Education	3
EDAD 630	Communication for School Executives	3
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 a fully 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 25 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 32. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 39. 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 dismissal from the program.

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

PSY 543	Advanced Educational Psychology	3
EDCI 610	Curriculum Planning and Programs	3
EDAD 502	Philosophy & Introduction to Ed.Adm.	3
EDAD, or EDCI 511	Research & Statistics	3
		12

Required Courses - 18 hours

EDAD 503	School Supervision	3
EDAD 505	School Law	3
EDAD 551A	Practicum in Administration/Supervision	1
EDAD 551B	Practicum in Administration/Supervision	1
EDAD 551C	Practicum in Administration/Supervision (taken near the end of the program)	1
EDAD 564	Social and Political Issues in Education	3
EDAD 572	School Finance	3
EDAD 609	School Plant and Educational Facilities	3
		18
Electives		3
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

PSY 543	Advanced Educational Psychology	3
EDCI 610	Curriculum Planning & Programs	3
EDAD 502	Philosophy & Introduction to Ed.Adm.	3
EDAD, or EDCI 511	Research and Statistics	3
		12

Required Courses - 15 hours

EDAD 503	School Supervision	3
EDAD 505	School Law	3
EDAD 564	Social and Political Issues in Education	3
EDAD 572	School Finance	3
EDAD 609	School Plant & Educational Facilities	3
		15
Electives		6
Total		33

COURSE DESCRIPTIONS

EDUCATIONAL ADMINISTRATION

EDAD 502. PHILOSOPHY AND INTRODUCTION TO SCHOOL ADMINISTRATION. (3) A general course designed to develop insight into the philosophy, history, and organization of schools.

EDAD 503. SUPERVISION AND IMPROVEMENT OF INSTRUCTION. (3) Designed to develop understanding of basic theories of supervision and supervisory procedures for improving instructional services.

EDAD 505. SCHOOL 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 507. 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 511. RESEARCH AND STATISTICS. (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 535. PARENTAL INVOLVEMENT EDUCATION. (3) This course is designed for those educators who deal with parental involvement in education.

EDAD 539. COMMUNITY RESOURCES. (3) This course is a study of the relationships between schools and communities. This course may be used for EDAD 564.

EDAD 542. 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 564.

EDAD 551A. THE PRINCIPAL AND/OR SUPERVISOR PRACTICUM. (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 551B. THE PRINCIPAL AND/OR SUPERVISOR PRACTICUM. (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 551C. THE PRINCIPAL AND/OR SUPERVISOR PRACTICUM. (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 564. SOCIAL AND POLITICAL ISSUES IN EDUCATION. (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 572. 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 591, 592, 593. PROBLEMS AND PROJECTS IN EDUCATION. (3) These are individual study courses and require special permission to sign up.

EDAD 600. STATISTICS FOR RESEARCH IN ADMINISTRATION. (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 511.

EDAD 607. LEGAL PROBLEMS. (3) Studies the legal facets of personnel administration in schools.

EDAD 609. THE SCHOOL PLANT AND EDUCATIONAL FACILITIES. (3) Emphasizes trends in school planning, designing, constructing, modernizing, and utilizing facilities.

EDAD 610. COMPUTER USES IN EDUCATIONAL ADMINISTRATION. (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 611. PERSONNEL EVALUATION. (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 612. 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 614.CULMINATING PROJECT FOR Ed. S. (3) Written after coursework and comprehensives completed. A general course to explore the ethical implications of being a school leader and administrator.

EDAD 615. ETHICS FOR SCHOOL ADMINISTRATORS. (3) A general course to explore the ethical implications of being a school leader and administrator.

EDAD 616. SCHOOL PRINCIPALSHIP. (3) Designed for administrators and teachers who desire to study purposes, practices, and trends in elementary school administration

EDAD 617. 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 625. INTERNATIONAL GLOBAL EDUCATION. (3) This course compares and contrasts the philosophy, course content, methodology and management styles of school systems of various countries.

EDAD 700. INTERDEPARTMENTAL DOCTORAL SEMINAR. (3) This course is designed to assist doctoral students in writing the dissertation proposal.

EDAD 701/601. THEORY AND PRINCIPLES OF EDUCATIONAL ADMINISTRATION. (3) A study of current theory and principles of educational administration.

EDAD 702. 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 implementations of policy in educational administration and supervision are analyzed.

EDAD 703. QUALITATIVE-NATURALISTIC AND SURVEY RESEARCH METHODS. (3) This course emphasizes the methodology involved in the development and implementation of naturalistic methods of research.

EDAD 704/604. 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 705/605. 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 706/606. 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 707. 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 708/608. 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 709. 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 710. 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 711. 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 712. ADVANCED METHODS OF RESEARCH. (3) A course designed to teach methods of educational research.

EDAD 713/613. 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 715. 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 718. COMPUTER APPLICATIONS FOR RESEARCH. (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 600 or equivalent.

EDAD 720. SCHOOL PERSONNEL 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 728/628. BUSINESS MANAGEMENT AND TRANSPORTATION. (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 730/630. 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 735. DECISION MAKING FOR ADMINISTRATORS. (3) This course emphasizes the analytical approach to decision making for school administrators.

EDAD 740. 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 741. 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 742. 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 co-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 743. 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 pre-requisites as well as approval of the instructor.

EDAD 744. 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 745. ECONOMICS AND FINANCE OF HIGHER EDUCATION. (3) Economics and Finance of Higher Education examines the economic context and fiscal management of higher education.

EDAD 746. 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 747. 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 810. 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 811. 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 810. The class prepares students for their Proposal Hearing. Prerequisite: Successful completion of the Comprehensive Examination.

GRADUATE FACULTY

Christon Arthur, Assistant Professor
B.A., 1989, Caribbean Union College; M.A., 1995, Ed.S., 1998, Ph.D., 2000, Andrews University.

Robert L. Boone, Professor and Associate Vice President for Academic Affairs
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.

Denise Dunbar, Assistant Professor
B.S. 1974, Northern Illinois University; M. Ed. 1983, Vanderbilt; Ed. D. 1989, Vanderbilt.

Janet M. Finch, Assistant Professor
B.S., 1972, M.A., 1978, Tennessee State University; Ph.D., 1985, George Peabody College of Vanderbilt University.

Kirmanj Gundi, Assistant Professor
B.S., 1986, Tennessee State University; M.Ed., 1994, Tennessee State University; Ed.D., 1998, Tennessee State University.

Pamela Harquail, Associate Professor
B.T. & B.A., 1975, St. Thomas University; M.Ed., 1980, University of New Brunswick; Ph.D., 1994, University of Southern Mississippi.

Franklin B. Jones, Professor and Dean, College of Education
B.S., 1958, M.A., 1959, Murray State University; Ed.D., 1967, University of Mississippi.

Barbara Nye, Professor, Director of Center for Policy and Basic Skills
B.S., 1973, M.S., 1977, University of Tennessee/ Knoxville; Ph.D., 1982, Vanderbilt University.

Karen Leigh Stevens, Assistant Professor
B.A., 1977, Belmont College; M.Ed., 1988, Belmont College; Ed.D., 1997, Vanderbilt University.

Almose A. Thompson, Professor
B.S., 1962, UCLA; M.A., 1970, CSULB; Ed.D, 1972, University of California/ Los Angeles; J.D., 1988, Vanderbilt University.

Roger W. Wiemers, Assistant Professor
B.A., 1992, International Bible Seminary; M.Ed., 1995, Ed.D., 1998, Tennessee State University.

John A. Williams, Assistant Professor
B.A., 1979, Southern University; Ph.D., 1992, Kansas State University.

DEPARTMENT OF HUMAN PERFORMANCE AND SPORT SCIENCES

Glenn Steimling, Ph.D., Acting Head
Office: 332 Gentry Center
(615) 963-5581

MAJOR: HEALTH, PHYSICAL EDUCATION AND RECREATION WITH CONCENTRATIONS IN HEALTH AND PHYSICAL EDUCATION, AND RECREATION ADMINISTRATION

DEGREE: MASTER OF ARTS IN EDUCATION (M.A.Ed.)

Note: The programs in this department are under revision, and approval will be sought before the end of the period covered by this Catalog.

The Department of Human Performance and Sport Sciences provides a wide range of advanced courses and specialized programs for teachers, coaches, administrators and creative scholars.

The degree offered in this department is a Master of Arts in Education with concentrations in Health, Physical Education, and Recreation Administration.

Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from a fully 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 25 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 870 or the MAT score 32. If the GPA is between 2.0 and 2.24, the GRE score must be 1000 or the MAT score 39. 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. Candidacy cannot be attained until the full requirements are met.

Degree Requirements

1. The M.A. Degree requires a minimum of thirty-three (33) semester hours including eighteen (18) hours of required HPER courses (15 for the Recreation Administration Option), nine (9) hours of general education courses, and six to nine hours of electives. Electives are to be selected on the basis of their contributions to the student's professional preparation.
2. Students who elect to a do a thesis or project, must enroll in HPER 512 or HPER 602 at least one semester prior to the semester in which they intend to complete work for the degree.
3. Students who choose the non-thesis option must take an additional three (3) hours and pass a comprehensive examination.

PROGRAM OF STUDY

(Note: At the time of printing, the HPSS curriculum revision is underway. When the revision process is completed, an addendum will be printed.)

HEALTH AND PHYSICAL EDUCATION CONCENTRATION

General Education Core - 9 hours

EDCI 526	Philosophy of Education	3
	or	
EDAD 502	Philosophy & Introduction to School Admin	3
PSY 504	Statistics and Methodology	3
	or	
EDAD 600	Statistics for Research in Administration	
PSY 543	Advanced Educational Psychology	3

Required Courses, HPER - 18 hours

HEA 504	Introduction to Epidemiology	3
HPER 510	Research Seminar	3
HPER 513	Cognitive and Kinetic Appraisal	3
HPER 519	HPER Seminar	3
HPER 521	Current Administrative Problems	3
HPER 523	Leisure in American Society	3

Electives - 6 hours

HEA 501	Methods and Materials in Health	3
HPER 591	Independent Study	3
HPER 511	Methods of Supervision	3
HPER 512	Thesis Writing	4
HPER 525	Administrative Practicum	3
HPER 602	Project Writing	3

Other courses may be selected with the approval of the department graduate advisor.

PROGRAM OF STUDY

RECREATION ADMINISTRATION CONCENTRATION

General Education Core - 9 hours

EDCI 526	Philosophy of Education	3
	or	
EDAD 502	Philosophy & Introduction to Educ. Admin.	3
PSY 504	Statistics and Methodology	3
	or	
EDAD 600	Statistics for Research in Administration	
PSY 543	Educational Psychology	3

Required Courses (17 semester hours) with or without thesis/project

HPER 591	Independent Study	3
HPER 519	HPER Seminar	2
HPER 521	Current Administrative Problems	2
HPER 523	Leisure in American Society	3
HPER 525	Administrative Practicum	4
HPER 510	Research Seminar	3

Thesis/Project (optional) (3 to 4 semester hours)

HPER 512 Thesis or	4
HPER 602 Project	3

Elective courses (9 to 14 semester hours)

COURSE DESCRIPTIONS

HEA 501. METHODS AND MATERIALS IN HEALTH. (3) This course considers the philosophy and practice of health education in the schools. Emphasis will be placed on curriculum development, problem-centered teaching methods, and use of instructional materials.

HEA 504. INTRODUCTION TO EPIDEMIOLOGY. (3) This course is designed to study factors influencing health and disease in a population. Relationship 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.

HEA 510. RESEARCH SEMINAR. (3) The current literature in health and physical education and recreation is reviewed in this course.

HPER 511. METHODS OF INSTRUCTION AND SUPERVISION IN PHYSICAL EDUCATION. (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.

HPER 512. THESIS WRITING. (4) 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.

HPER 513. TECHNIQUES OF COGNITIVE AND KINETIC APPRAISAL IN HPER (3) Designed to acquaint the student with the role of test and measurement in a total program of physical education.

HPER 519. HPER SEMINAR. (3) Designed to research the major issues facing the recreation profession today and to allow students to exchange and debate viewpoints on pertinent topics.

HPER 521. CURRENT ADMINISTRATIVE PROBLEMS. (3) Designed to assist teachers, supervisors, and administrators in solving problems peculiar to a program of health and/or physical education and/or recreation.

HPER 523. 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.

HPER 525. ADMINISTRATIVE PRACTICUM. (3) Supervised administrative PRACTICUM in selected health, physical education, or recreation agencies. The student is considered an administrative assistant, subject to responsibilities as evidenced in gainful employment in these areas; designed to provide practical administrative experiences in an area of professional interest to the student.

HPER 591. INDEPENDENT STUDY IN HPER. (1-3) 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. Students may register for one-to-three credits under the direction of the course instructor.

HPER 602. PROJECT WRITING HPER. (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

Harry Beamon, Professor
B.S., 1969, M.A.Ed., 1970 Tennessee State University; Ed.S., 1974, Ed.D., 1979, George Peabody College of Vanderbilt

Hezekiah Foreman, Professor
B.A., 1959, M.A., 1969, Tennessee State University; Ph.D., 1980, Southern Illinois University at Carbondale

Jesse James, Associate Professor
B.S., 1973, M.A., 1975, Ed.D, 2000, Tennessee State University

Catana R. Starks, Professor
B.S., 1971, M.A.Ed., 1973, Tennessee State University; Ed.D., 1989, Tennessee State University

Glenn Steimling, Assistant Professor
B.S., 1981, Plymouth State College; M.A.Ed., 1991, University of Arizona; Ph.D., 1997, University of New Mexico

DEPARTMENT OF PSYCHOLOGY

Peter E. Millet, Ph.D., Head
Office: 303-C Clay (Education) Building
(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's of Science in Psychology degree with two concentrations: Counseling Psychology and School Psychology; and a Master's of Science in Guidance and Counseling with a concentration 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 education. 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. These concentrations are designed for the student seeking training as a Scientist-Professional. 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 Department 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 February 15th for admission in the Fall.

1. An application for admission to the Graduate School.
2. Transcripts of all graduate and undergraduate course work. A minimum grade point average of 3.25 at the Master's is required.
3. Quantitative and Verbal Scores on the Graduate Record Examination (GRE) or Millers Analogy Test (MAT) is required. While both the GRE and MAT are acceptable, the GRE is preferable. The minimum acceptable standards for admission are 3.25 Master's GPA and a 900 on the GRE (Verbal + Quantitative) or 44 on the MAT. Exceptions may be considered for applicants with extraordinary qualities who have demonstrated excellence in the field of work or research, and add diversity to the program. However, a student whose combined GRE is less than 1000 or whose MAT is less than 60 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 February 15th deadline will be evaluated by the respective program committees that will select the applicants to be interviewed on the campus in early March. **An interview is required for admission.** If selected for admission, the applicant will be notified and must respond not later than April 15 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 evidences 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-five (65) semester hours of approved course work for Counseling Psychology concentration or 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. Acceptable internships are those accredited by the American Psychological Association (APA) and/or those listed in the Association of Pre and Post-Doctoral Internship Centers (APPIC) directory. 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 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. 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 s/he has successfully completed the comprehensive examination. Once enrolled, the student must continually 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 concentration in Counseling Psychology requires a minimum of sixty-five (65) semester hours. These hours include 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, aptitude and achievement testing, theories of learning, history and systems of psychology and two substantive areas such as psychometrics, advanced general psychology, 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, Statistics & Research Methods (PSY 713A) and Statistics and Computer Applications for Research (713B).

PROGRAM OF STUDY

(Note: This catalog includes the curricular revision implemented in the Fall semester of 1999. Those students admitted prior to that date should consult with their advisors.)

EDCI 630	Multicultural Education	3
PSY 705	Ethics and Professional Issues in Counseling Psychology	3
PSY 713A	Statistics and Research Methods	3
PSY 713B	Statistics and Computer Applications	3
PSY 713C	Advanced Statistics and Research Methods	3
PSY 715	Change Processes - Theory, Research & Efficacy	3
PSY 716	Prepracticum	1
PSY 725A	Psychopathology	3
PSY 725B	Assessment of Psychopathology	3
PSY 726	Practicum	1
PSY 736A	Doctoral Practicum in Counseling Psychology	2
PSY 736B	Doctoral Practicum in Counseling Psychology	2
PSY 736C	Doctoral Practicum in Counseling Psychology	1
PSY 736D	Doctoral Practicum in Counseling Psychology	1
PSY 753	Consultation and Program Evaluation	
	OR	
PSY 773	Qualitative Research	3
PSY 755A	Individuals: Assessment, Theory & Intervention	3
PSY 755B	Couples, Families & Systems:Assessment, Theory & Intervention	3
PSY 755C	Supervision: Assessment, Theory & Intervention	3
PSY 775	Contemporary Career Development	3
Specialty Electives - As Approved by Advisor		12
Dissertation		**6-15**

PSY 811 Dissertation Research
Prior to enrolling in PSY 811, students must have successfully completed comprehensive examinations. Once students begin the dissertation, they must register for PSY 811 every semester until the dissertation is completed and defended. After the fifth registration for dissertation, students register in "Dissertation Continuation" at a reduced fee.

Doctoral Internship **0-0-0**

PSY 809 A-B-C 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 PSY 809 A, B, & C 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-three (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 student's 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, advanced general psychology, theories of counseling, individual intelligence testing, and learning theory. A master's level practicum in School Psychology is a required prerequisite for the doctoral program. None of these courses nor any master's level practicum count toward completion of the doctoral degree. 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 630	Multicultural Education	3
PSY 643	History & Systems of Psychology	3
PSY 690	Seminar in School Psychology	3
PSY 713A	Statistics & Research Methods	3
PSY 713B	Statistics & Computer Applications	3
PSY 713C	Advanced Statistics & Research Methods	3
PSY 714A	Interfacing Therapy with Men's Current Issues	3
	OR	
PSY 714B	Interfacing Therapy with Women's Current Issues	
PSY 715	Change Processes - Theory, Research & Efficacy	3
PSY 716	Pre-Practicum	1
PSY 725A	Psychopathology	3
PSY 725B	Assessment of Psychopathology	3
* PSY 726	Practicum	1
**PSY 746A	Doctoral Practicum in School Psychology	2
**PSY 746B	Doctoral Practicum in School Psychology	2
PSY 753	Consultation and Program Evaluation	
	OR	
PSY 773	Qualitative Research	3
PSY 755A	Individuals: Assessment, Theory & Intervention	3

PSY 755B	Couples, Families & Systems: Assessment, Theory & Intervention	3
PSY 755C	Supervision: Assessment, Theory & Intervention	3
PSY 771	Psychoeducational Assessment	3

Specialty Electives (As Approved by Advisor) **6**

* A practicum is a prerequisite for doctoral practicum.

** PSY 715 and PSY 725A must be taken prior to enrolling in doctoral PSY 746A or PSY 746B

Dissertation **6-15 hours**

PSY 811 Dissertation Research
Prior to enrolling in PSY 811, students must have successfully completed comprehensive examinations. Once students begin the dissertation, they must register for PSY 811 every semester until the dissertation is complete. After the fifth registration for dissertation, students register in "Dissertation Continuation" at a reduced fee.

Doctoral Internship **0 hours**

PSY 810 A -B- C 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 PSY 810 A, B, and C Internship during the internship year.

MAJOR: PSYCHOLOGY

DEGREE: EDUCATIONAL SPECIALIST (Ed.S.)

SCHOOL PSYCHOLOGY

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 Standards

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 38 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. 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 must 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

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 student's program.

Required Courses - 33 hours

EDAD 502	Philosophy & Introduction to Schools OR	
EDAD 564	Politics of Education	3
EDRD 564	Diagnosis & Treatment of Reading Disabilities OR	3
EDRD 605	Strategies of Developing Reading & Study Skills	
PSY 617	Individual Tests of Intelligence	3
PSY 647	Individual Testing & Report Writing	3
PSY 672A	Practicum in School Psychology	3
PSY 672B	Practicum in School Psychology	3
PSY 691A	Internship in School Psychology (Specialist)	3
PSY 691B	Internship in School Psychology (Specialist)	3
PSY 692	Psychological Disorders of Children	3
PSY 693	Alternatives to Standardized Assessment	3
PSY 694	Consultation in the Schools	3
PSY XXX	Guided Specialty 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. The primary goal is to train competent and caring individuals who are able to integrate theory, research, and practice with personal and interpersonal skills and awareness to work with diverse populations. Students are trained to assess and intervene with individuals, families, systems and groups to resolve crises, alleviate distress and maladjustment, improve problem-solving and decision making, etc. In addition, attention is given to training students to promote normal behaviors and development through education and prevention.

Students are given a solid psychological core with a focus on emotional, social, vocational health, and educational issues across the life span. Completion of a minimum of fifty (50) semester hours of approved graduate work is required.

Admission Standards

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, physiological, social, history and

systems and developmental psychology. The minimum acceptable admission requirements are a 2.5 or higher GPA, a composite GRE (Verbal + Quantitative + Subject, or Verbal + Quantitative only) of 870 or higher, or a MAT of 25 or higher for unconditional admission. Conditional admission may be offered for 2.25-2.49 GPA with a composite GRE (Verbal + Quantitative + Subject) of 935 or higher or a MAT of 32, or a 2.0-2.24 GPA with a composite GRE (Verbal + Quantitative + Subject) of 1000 or higher or a MAT of 39 or higher. Students admitted conditionally must earn a "B" or better in the first twelve hours of graduate work to gain the unconditional status. However, GRE scores are preferable to MAT scores.

Degree Requirements

A minimum of four semesters and a summer term of residential study and fifty (50) semester hours of approved course work are required.

PROGRAM OF STUDY

Required Courses - 50 Hours

PSY 503	Biological Bases of Behavior	3
PSY 504	Statistics & Methodology	3
PSY 507	Professional Issues and Ethics in Counseling Psychology	3
PSY 510	Prepracticum	1
PSY 513	Abnormal Psychology & Theories of Personality	3
PSY 514	Statistics & Computer Applications	3
PSY 517	Counseling Theory	3
PSY 520	Practicum	2
PSY 523	Learning Theories	3
PSY 527	Vocational Theory & Testing	3
PSY 553	Psychometrics	3
PSY 563	Child and Adolescent Development	3
PSY 613	Social Bases of Behavior	3
PSY 617	Individual Tests of Intelligence	3
PSY 637	Interests, Aptitude & Achievement	3
PSY 643	History & Systems of Psychology	3
PSY 650	A-B Internship	2,2
PSY 654	Thesis	1

If licensure as a Psychological Examiner is sought, eighteen (18) hours of course work must be completed prior to practicum. Practicum hours do not count towards the hours of experiential intervention course work required by the Board of Examiners.

MAJOR: PSYCHOLOGY

DEGREE: MASTER OF SCIENCE (M.S.)

SCHOOL PSYCHOLOGY CONCENTRATION

Applicants with bachelor's degrees will be admitted initially into the M.S. program. Upon successful completion of the M.S. program, students will either matriculate to the Ed.S. program or can apply for admission to the Ph.D. program. **Students typically are not eligible for certification/licensure as a School Psychologist with only a master's degree.**

Admission Standards

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 admissions requirements are a 2.5 or higher GPA, a composite GRE (Verbal + Quantitative + Subject OR Verbal + Quantitative only) of 870 or higher, or an MAT of 25 or higher for unconditional admission. Conditional admission may be offered for 2.25 - 2.49 GPA with a composite GRE (Verbal + Quantitative + Subject) of 935 or higher or an MAT of 32, or a 2.0-2.24 GPA with a composite GRE Verbal + Quantitative + Subject) of 1000 or higher or an MAT of 39 or higher. 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 (40) 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 - 40 hours

EDCI 530	Multicultural Education	3
EDSE 553	Education & Psychology of Exceptional Children	3
PSY 503	Biological Bases of Behavior	3
PSY 504	Statistics & Methodology	3
PSY 510	Prepracticum	1
PSY 514	Statistics & Computer Applications	3
PSY 517	Counseling Theory	3
PSY 520	Practicum	2
PSY 523	Learning Theories	3
PSY 553	Psychometrics	3
PSY 563	Indiv Differences in Child & Adolescent Devel	3
PSY 613	Social Bases of Behavior	3
PSY 617	Individual Tests of Intelligence	3
PSY 654	Thesis	1
PSY 690	Seminar in Professional School Psychology	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 are a 2.5 or higher GPA with a composite GRE (Verbal + Quantitative + subject OR Verbal + Quantitative only) of 870 or higher or an MAT of 25 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 to be submitted directly to the Program Coordinator.
3. A review of applicant's files 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 Pre-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 hours*

*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)**
PSY 563	Child and Adolescent Development	3
EDSE 553	Education and Psychology of Exceptional Children	
AREA II	**Social and Cultural Foundations**	**(9 Hours)**
PSY 513	Abnormal Psychology and Theories of Personality	3
PSY 557	Individual, Couples, and Family Systems	3
PSY 613	Social Bases of Behavior	3
AREA III	**The Helping Relationship**	**(15 Hours)**
PSY 517	Counseling Theories	3
*PSY 636	Pre- Practicum Field Experience	3
PSY 646	Practicum in School Counseling	3
PSY 640A	Internship - Elementary School	3
PSY 640B	Internship - Secondary School	3
AREA IV	**Group Work**	**(3 Hours)**
PSY 519	Group Counseling and Guidance	3
AREA V	**Career and Lifestyle Development**	**(3 Hours)**
PSY 527	Vocational Choice Theory and Testing	3
AREA VI	**Appraisal**	**(6 Hours)**
PSY 553	Psychometrics	3
PSY 637	Interests, Aptitude and Achievement Testing	3
AREA VII	**Research and Program Evaluation**	**(3 Hours)**
PSY 504	Statistics and Methodology	3
AREA VIII	**Professional Orientation**	**(6 Hours)**
PSY 508	Professional Issues and Ethics for Counselors	3
PSY 509	Guidance and Counseling Services in the Schools	3

Required Field Experiences

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 (640A) and Secondary School Counseling (640B).

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. Seek non-degree admission to the Graduate School.
3. Contact the program coordinator to arrange an interview with the School Counseling Committee.

COURSE DESCRIPTIONS

PSY 503 (730). BIOLOGICAL BASES OF BEHAVIOR. (3) First course in the master's Psychological Foundations sequence. 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.

PSY 504 (511). STATISTICS AND METHODOLOGY. (3) First course in the master's Research Core sequence. 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: Undergraduate Elementary Statistics

PSY 507 (603). PROFESSIONAL ISSUES AND ETHICS IN COUNSELING PSYCHOLOGY. (3) First course in the Master's in Counseling Psychology Specialty sequence. 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 graduate program in psychology.

PSY 508 (603). PROFESSIONAL ISSUES & ETHICS FOR COUNSELORS. (3) Third course in the master's Specialty Core sequence. This seminar course is designed to introduce students to ethical codes, legal guidelines and professional issues relevant to the fields of counseling. Students will be exposed to a wide range of topics and readings, and be expected to write an original research paper on a salient topic of their choosing. Prerequisites: Admission to master's program.

PSY 509 (532/534/580). 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.

PSY 510 (635). PRE-PRACTICUM. (1) First in the master's Practice Core sequence of training experiences designed to facilitate progressively greater degrees of skill development in counseling. 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 Master's Program in Psychology.

PSY 513 (625). INDIVIDUAL DIFFERENCES: ABNORMAL PSYCHOLOGY AND THEORIES OF PERSONALITY. (3) First course in the master's Specialty Core sequence. Theories of 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: Admission to the Graduate School.

PSY 514 (502). STATISTICS AND COMPUTER APPLICATIONS. (3) Second course in the master's Research Core sequence. Continuation of PSY 504. Complex data analysis and interpretation of additional multivariate topics not covered in PSY 504A 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: PSY 504.

PSY 517 (537). COUNSELING THEORY. (3) Second course in the master's Specialty Core sequence. 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: Admission to the Graduate School.

PSY 519. 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: Admission to the Graduate School.

PSY 520 (672A). PRACTICUM. (2) Second course in the master's Practice Core sequence of training experiences designed to facilitate progressively greater degrees of skill development in counseling. Continuation of PSY 510. 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. Includes 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 PSY 640, 650, 672, or 691. Students must demonstrate proof of current professional liability insurance. Prerequisites: PSY 510; admission to graduate program in psychology.

PSY 523 (645/745). LEARNING THEORIES. (3) Second course in the master's Psychological Foundations sequence. The major problem areas, methodology, theories and research in complex behavioral. Prerequisite: Admission to the Graduate School.

PSY 527 (538). VOCATIONAL THEORY AND TESTING. (3) Fourth course within the master's Specialty Core sequence. Theories and empirical research related to vocational choice, decision-making, and assessment 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 field surveys and interviews applied to work related concerns, formal assessment including technological approaches to career planning, and resume writing. Prerequisites: Admission into the Master's or Doctoral programs in Psychology; PSY 517 or equivalent.

PSY 543. 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.

PSY 553 (531). PSYCHOMETRICS. (3) Third course in the master's Psychological Foundations sequence. 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: PSY 504 & 514; Admission to graduate program in psychology or Pre-K-12.

PSY 557 (604). 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: PSY 517.

PSY 563 (551). INDIVIDUAL DIFFERENCES IN CHILD & ADOLESCENT DEVELOPMENT. (3) Sixth course in the master's Psychological Foundations sequence. 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; PSY 503, 504, 514, & 523.

PSY 605. ADVANCED GENERAL PSYCHOLOGY. (3) Selected topics in contemporary psychology, applying research findings to human behavior.

PSY 608. HISTORY & SYSTEMS OF GUIDANCE & COUNSELING. (3) First course in the Guidance and Counseling Specialty sequence. Historical foundation and current issues of the Guidance movement in the United States. Prerequisite: Admissions into the Master's program in Guidance & Counseling.

PSY 613 (533/541). SOCIAL BASES OF BEHAVIOR. (3) Fourth course in the master's Psychological Foundations sequence. 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.

PSY 617 (571). INDIVIDUAL TESTS OF INTELLIGENCE. (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 WISC-III, the WAIS-R, and the Stanford-Binet. Prerequisite: PSY 553; written permission of the instructor is required prior to enrolling.

PSY 636 (636A/636B). 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 into the Graduate School.

PSY 637 (575). INTEREST, APTITUDE & ACHIEVEMENT TESTING. (3) Fifth course in the master's Psychological Foundations sequence. Application of principles, strategies, and methodologies of interviewing and report writing in the areas of interests, aptitude, and achievement testing with diverse populations. Prerequisite: PSY 553 or equivalent with instructors approval; admission to graduate program in psychology or guidance and counseling.

PSY 640 A. INTERNSHIP. (ELEMENTARY SCHOOL COUNSELING). (3) A supervised internship that is begun after the successful completion of the student's practicum. Students will be placed in sites that provide the student with the opportunity to engage in individual and group counseling under supervision. Students will also be involved in case conferences, and contacts with the appropriate persons and agencies consistent with the expectations of those of a regularly employed counselor. The student is expected to commit to 300 clock hours at the internship site. Prerequisite: PSY 636 or permission of instructor.

PSY 640 B. INTERNSHIP. (SECONDARY SCHOOL COUNSELING). (3) A supervised internship that is begun after the successful completion of the student's practicum. Students will be placed in sites that provide the student with the opportunity to engage in individual and group counseling under supervision. Students will also be involved in case conferences, and contacts with the appropriate persons and agencies consistent with the expectations of those of a regularly employed counselor. The student is expected to commit to 300 clock hours at the internship site. Prerequisite: PSY 636 or permission of instructor.

PSY 643. 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

PSY 646. PRACTICUM. (PRE-K-12). (3) This practicum provides an opportunity for the student to engage in working with clients under supervision. It provides for the development of individual and group counseling skills. Prerequisite: PSY 510 & 517. Permission to renroll requires approval of Coordinator of Pre-K-12 School Counseling Program one semester prior to enrollment.

PSY 647. 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: PSY 553 & 617

PSY 650 A (692A). MASTER'S INTERNSHIP IN COUNSELING PSYCHOLOGY. (2) Third course in the master's Practice Core sequence. 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. 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 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 Program Coordinator one semester prior to enrollment; PSY 520.

PSY 650 B (692B). MASTER'S INTERNSHIP IN COUNSELING PSYCHOLOGY. (2) Fourth course in the master's Practice Core sequence. 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. 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 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 Program Coordinator one semester prior to enrollment; PSY 520.

PSY 654 A (512). THESIS. (1) A scientific research thesis is executed under the direct supervision of an approved graduate faculty person. 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: PSY 514.

PSY 657. 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 examined. 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.

PSY 660 A. MASTER'S INTERNSHIP IN GUIDANCE & COUNSELING. (2) Supervised practice experience within an approved setting. Supervision is provided by an on site supervisor and a university supervisor. Students must obtain internship placement and have it approved with the program coordinator the semester before enrolling in this course. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to master's program in guidance and counseling; approval of the respective Program Coordinator one semester prior to enrollment; PSY 520.

PSY 660 B. MASTER'S INTERNSHIP IN GUIDANCE & COUNSELING. (2) Supervised practice experience within an approved setting. Supervision is provided by an on site supervisor and a university supervisor. Students must obtain internship placement and have it approved with the program coordinator the semester before enrolling in this course. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to master's program in guidance and counseling; approval of the respective Program Coordinator one semester prior to enrollment; PSY 660 A.

PSY 672. PRACTICUM IN SCHOOL PSYCHOLOGY. (1) 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; PSY 510.

PSY 682 A-B. 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; PSY 682 A

PSY 690. SEMINAR IN SCHOOL PSYCHOLOGY. (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.

PSY 691 A-B. 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.

PSY 692. 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; PSY 513 and/or 563.

PSY 693. Alternatives to Standardized Assessment. (3) Theory and practicum 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; PSY 553 or equivalent.

PSY 694 Consultation in Schools. (3) Students learn consultation skills an processing utilizing a number of professional models such as Caplan's model, behavioral and problems solving models, crisis consultation and direct/indirect consultation. Prerequisite: Admission to the Graduate School; PSY 510.

PSY 705. ETHICS & PROFESSIONAL ISSUES IN COUNSELING PSYCHOLOGY. (3) First course in the doctoral Advanced Psychological Foundations core. 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.

PSY 713. 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.

PSY 713 A (712). STATISTICS & RESEARCH METHODS. (3) First course in the doctoral Advanced Research Core. A course in theoretical quantitative analysis and research methods emphasizing the logic in making decisions and predications in conducting research rather than as a consumer of research exclusively. Prerequisite: PSY 504 and 514 or equivalent.

PSY 713 B (701). STATISTICS & COMPUTER APPLICATIONS TO RESEARCH. (3) Second course in the doctoral Advanced Research Core sequence. Continuation of Research Core I: PSY 713 A. Complex data analysis and interpretation of additional multivariate topics not covered in PSY 713 A 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: PSY 713 A

PSY 713 C (718). ADVANCED STATISTICS & RESEARCH METHODS. (3) Third course in the doctoral Advanced Research Core sequence. Extension of issues introduced in PSY 713 B and advanced statistical topics more germane to Psychology graduates conducting research in various settings. Prerequisite: PSY 713 B

PSY 714 A-M. SPECIAL TOPICS. (3) Special topics in psychology are offered on an alternating basis. May be repeated for credit a maximum of twice. Prerequisite: PSY 713 B.

PSY 715 (735). CHANGE PROCESSES: THEORY, RESEARCH & EFFICACY. (3) Second course in the doctoral Advanced Psychological Foundations Core sequence. 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; PSY 705.

PSY 716 (738B). PRE-PRACTICUM. (1) First course in the doctoral Advanced Practice Core sequence. 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

PSY 725 A. PSYCHOPATHOLOGY. (3) Third course in the doctoral Advanced Psychological Foundations Core sequence: Theory, research and diagnosis of deviant behavior patterns. Emphasis on most current version of the Diagnostic Statistical Manual (DSM). Prerequisite: Admission to the doctoral program in Counseling Psychology; PSY 705 & 715

PSY 725 B. ASSESSMENT OF PSYCHOPATHOLOGY. (3) Fourth course in the doctoral Advanced Psychological Foundations core sequence. Theory, research and application of assessment to diagnosis of deviant behavior patterns. Emphasis on most current version of the Diagnostic Statistical Manual (DSM) and objective appraisal techniques. Prerequisite: Admission to the doctoral program in Counseling Psychology; PSY 725 A.

PSY 726 (739D).PRACTICUM. (1) Second course in the doctoral Advanced Practice Core sequence of progressive training experiences 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: PSY 719.

PSY 732. 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.

PSY 736 A-B-C-D-E (739). DOCTORAL PRACTICUM IN COUNSELING PSYCHOLOGY. (2,2,1,1,1) Five semester sequence of doctoral Advanced Practice Core for Counseling 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. During 736 C & D which is required of students in the Counseling Psychology concentration, students will provide supervision to beginning doctoral students enrolled in PSY 726. The final section 736 E will be offered on an as needed basis for summer elective enrollment. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of program coordinator one semester before beginning course; PSY 726.

PSY 746 A (739D). 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; PSY 720.

PSY 746 B. 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; PSY 746 A.

PSY 753 (763). CONSULTATION AND PROGRAM EVALUATION. (3) Fourth course in the doctoral Advanced Research Core sequence. 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 with Diverse Populations. Prerequisite: PSY 713 C

PSY 755 A. ASSESSMENT, THEORY & INTERVENTIONS WITH INDIVIDUALS. (3) Fifth course in the doctoral Advanced Psychological Foundations Core sequence. Theory, research, and assessment techniques related to treatment of individuals including personal and vocational concerns across the lifespan. Prerequisites: PSY 705,715,725 A & B

PSY 755 B (678/778). ASSESSMENT, THEORY & INTERVENTIONS WITH COUPLES, FAMILIES & SYSTEMS. (3) Sixth course in the doctoral Advanced Psychological Foundations core sequence. 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: PSY 705,715, & 725 A-B.

PSY 755 C. 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: PSY 736 B or 746 B, PSY 755 A & B.

PSY 771. 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: PSY 617 or written permission of instructor prior to enrollment.

PSY 773. QUALITATIVE RESEARCH WITH DIVERSE POPULATIONS. (3) Fifth course in the doctoral Advanced Research Core sequence. This course will focus on advanced qualitative methods and analysis specific to qualitative studies with research with diverse groups. This course will alternate on an annual basis with Consultation and Program Evaluation. Prerequisite: PSY 713 C

PSY 775. CAREER DEVELOPMENT: THEORIES, METHODS AND 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.

PSY 809 A-B-C. 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. Prerequisite: Permission of appropriate program coordinator one academic year in advance, completion of all course work & doctoral comprehensive examinations.

PSY 810 A-B-C. 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.

PSY 811. DISSERTATION. (3) The design and implementation of an extensive and intensive study of a psychological nature requiring the use of quantitative competencies and skills under the direction of a committee and its chairperson. Students may enroll for no more than three (3) semester hours of dissertation credit per semester for a minimum of two semester. 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.

GRADUATE FACULTY

Erlete Ascencao, Assistant Professor
A.A., 1979, Reinhardt College, B.A., 1980 Berry College; B.S., 1986, Georgia State University; M.A., 1982, Ph.D., 1986, Emory University; Ph.D., 1995, University of Tennessee

Helen R. Barrett, Professor
B.A., 1965, Barnard College; M.A., 1967, Ph.D., 1970, Southern Illinois University

Lynn Boyer, Associate Professor
B.A., 1980, Texas Women's College, M.S., 1982, Texas A&M University, Ph.D., 1992 University of Mississippi

James E. Chatman, Associate Professor
B.A., 1972, M.A., 1974, Fisk University; Ph.D., 1979, Vanderbilt University

Sue Fuller, Professor
A.A. 1966, Virginia Intermont College; B.S., 1968, M.S., 1971, Tennessee Technological University; Ed.D., 1973, University Of Tennessee

Linda Guthrie, Assistant Professor
B.S., 1965, M.Ed., 1969, Middle Tennessee State University; Ph.D., 2000, Tennessee State University

Rosemary G. Jeffries, Associate Professor
B.S., 1969, M. S., 1971, Tennessee State University; Ph.D., 1986, George Peabody College Of Vanderbilt University

Roger W. Jones, Professor
B.A., 1963, M.S., 1965, Ph.D., 1968, University Of Georgia

John W. Joyner, Professor
B.S., 1960, M.S., 1962, Tennessee State University; Ph.D., 1972, The Ohio State University

Pamela L. Knox, Associate Professor
B.S., 1978, College Of Charleston; M.S., 1981, Ph.D., 1984, Virginia Commonwealth University

Linda Knieps, Ph.D., Assistant Professor
B.A., 1986, State University of New York at Buffalo; M.S., 1989, Ph.D., 1997, Vanderbilt University

Cornell D. Lane, Associate Professor
B.S., 1962, M.S., 1965, Tennessee State University; Ed.D., 1976, University Of Tennessee

David H. Martin, Professor
B.A., 1961, David Lipscomb University; M.A., 1962, Ph.D., 1966, George Peabody College Of Vanderbilt University

Peter E. Millet, Associate Professor and Head
B.A., 1985, Oakland University; M.A., 1989, The Ohio State University; Ph.D., 1994, The Ohio State University

Steven T. Olivas, Assistant Professor
B.A., 1989, M.S., 1991, University Of Wisconsin-Whitewater; Ph.D., 1996, University Of Oklahoma

N. Carolyn Owens, Associate Professor
B.S., 1963, M.A., 1985, Ed.D., 1994 University of Cincinnati

Amy E. Sibulkin, Associate Professor
B.A., 1976, Clark University; M.S., 1979, Ph.D., 1981, Cornell University

Darrell Smith, Professor
B.A., 1960, M.A., 1970, University Of Kentucky; Ph.D., 1972, Purdue University

Stephen Trotter, Associate Professor
B.S., 1972, Stephen F. Austin State University; M.S., 1976, University of Houston; Ph.D., 1981, University of Utah

Dorothy Tucker, Assistant Professor
B.A., M.S., Ph.D., 1997 George Peabody College of Vanderbilt University

DEPARTMENT OF TEACHING AND LEARNING

Dean B. Roberts, Ed.D., Head
203 Clay (Education) Building
(615) 963-5465

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 four concentrations: Curriculum Planning, Elementary Education, Reading, and Secondary 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 44
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. Letters of recommendation indicating probable success in the program
5. Proof of the ability to write effectively
6. An acceptable interview

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 630	Multicultural Education	(3)
EDCI 700	Foundations of Education	(3)
EDAD or EDCI 712	Advanced Methods of Research	(3)
EDAD 704	Leadership and Interpersonal Relationships	(3)
PSY 745	Learning Theories for Teachers	(3)
*EDAD 718	Computer Applications for Education	(3)

(*EDAD 600 is a prerequisite for EDAD 718.)

CONCENTRATION I: CURRICULUM PLANNING

Specialized Courses - 24 hours

EDAD 503	School Supervision	(3)
EDAD 616	The School Principalship	(3)
EDAD 620	Organization and Administration Of the Secondary School	(3)
EDCI 610	Curriculum Planning and Programming	(3)
EDCI 613	Seminar in Curriculum Design	(3)
EDCI 615	Seminar in Curriculum Development	(3)
EDCI 617	Non-traditional Education Uses of Microcomputers	(3)
EDCI 618	Microcomputer Technology in Primary and Elementary Schools	(3)
EDCI 619	Microcomputers and Educational Services	(3)
EDCI 620	Instructional Applications of Word-Processing	(3)
EDCI 702	Doctoral Seminar in Curriculum	(3)
EDCI 703	Independent Study	(3)
EDCI 708	Curriculum Theory	(3)
EDCI 711	Seminar in Instruction	(3)
EDCI 714	Principles of Teaching	(3)
EDCI 787	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 700 be taken the semester prior to or during the first semester of enrollment in EDCI 810.)

Dissertation - 6 to 15 hours

EDCI 810	Doctoral Dissertation

Once students begin the dissertation, they must register for EDCI 810 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

EDAD 503	School Supervision	(3)
EDCI 610	Curriculum Planning and Programming	(3)
EDCI 613	Seminar in Curriculum Design	(3)
EDCI 617	Non-Traditional Education Uses of Microcomputers	(3)
EDCI 618	Microcomputer Technology in Primary and Elementary Schools	(3)
EDCI 628	Designing Middle School Curriculum	(3)
EDCI 629	Advanced Language Arts	(3)
EDCI 634	Evaluation of Education Programs	(3)
EDCI 682	Advanced Mathematics in the Elementary School	(3)
EDCI 683	Advanced Science in the Elementary School	(3)
EDCI 703	Independent Study	(3)
EDCI 708	Curriculum Theory	(3)
EDCI 787	The Elementary and Secondary Curriculum	(3)
PSY 613	Social Bases of Behavior	(3)

Electives - 12 hours (Electives must be taken outside of the student's major field. It is suggested that EDAD 700 be taken immediately prior to or during the first semester of enrollment in EDCI 810.)

Biology
Chemistry
Early Childhood Education
Educational Administration
English
Mathematics
Guidance K- 12
Reading
Human Performance and Sport Sciences
Social Studies

Dissertation - 6 to 15 hours

EDCI 810	Doctoral Dissertation

Once students begin the dissertation, they must register for EDCI 810 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 616	The Elementary School Principal	(3)
EDAD 620	Organization and Administration Of the Secondary School	(3)
EDCI 617	Non-Traditional Education Uses of Computers	(3)
EDCI 618	Microcomputer Technology in Primary and Elementary Schools	(3)
EDCI 704	Comparative Education	(3)
EDCI 708	Curriculum Theory	(3)

B. Reading Education -12 hours (Select from the list below)

EDRD 580	Linguistic Applications to Teaching Language Arts	(3)
EDRD 587	Interpreting Research Findings Into Classroom Practice	(3)
EDRD 609	Teaching Adults to Read and Write	(3)
EDRD 620	Directed Individual Study of Instructional Strategies in Reading	(1-3)
EDRD 621	Directed Individual Study in Supervising (A,B,& C)Reading Instruction and/or Programs (can be repeated)	(1-3)
EDRD 622	Directed Individual Study of Individualized (A,B,& C)Clinical Procedures	(1-3)
EDRD 650	Investigating Reading and Writing Processes	(3)
EDRD 710	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 700 be taken immediately prior to or during the first semester of enrollment in EDCI 810.)

Dissertation - 6 to 15 hours

EDCI 810 DOCTORAL DISSERTATION

Once students begin the dissertation, they must register for EDCI 810 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

SOC 520	Education Sociology	(3)
EDAD 503	School Supervision	(3)
EDAD 620	Organization and Administration Of the Secondary School	(3)
EDCI 610	Curriculum and Planning and Programming	(3)
EDCI 613	Seminar in Curriculum Design	(3)
EDCI 617	Non-Traditional Education Uses of Computers	(3)
EDCI 619	Microcomputers and Educational Services	(3)
EDCI 620	Instructional Applications of Word-Processing	(3)
EDCI 628	Advanced Language Arts	(3)
EDCI 634	Evaluation of Education Programs	(3)
EDCI 702	Doctoral Seminar in Curriculum	(3)
EDCI 703	Independent Study	(3)
EDCI 708	Curriculum Theory	(3)
EDCI 711	Seminar Instruction	(3)
EDCI 714	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 810 DOCTORAL DISSERTATION

Once students begin the dissertation, they must register for EDCI 810 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 503	School Supervision	(3)
EDCI 617	Non-Traditional Education Uses of Microcomputers	(3)
EDCI 620	Instructional Applications of Word Processing	(3)
EDCI 610	Curriculum Planning	(3)
EDCI 613	Seminar in Curriculum	(3)
EDCI 708	Curriculum Theory	(3)
EDCI 702	Doctoral Seminar in Curriculum	(3)
EDCI 703	Doctoral Independent Study	(3)
EDCI 711	Seminar in Instruction	(3)

B. Special Education - (12 Hours)

EDSE 507	Teaching the Emotionally Disturbed Child	(3)
EDSE 637	Characteristics and Strategies for the Physically Challenged	(3)
EDSE 652	Org./Admin. Of Program and Services For the Disabled	(3)
EDSE 653	Education and Psychology of Exceptional Child	(3)
EDSE 654	Theory and Procedures for Teaching The Exceptional Child	(3)
EDSE 656	Psycho-educational Diagnosis of the Exceptional Child	(3)

EDSE 657	Consultation and Collaboration	(3)
EDSE 658	Learning and Behavioral Disabilities	(3)
EDSE 659	Characteristics and Needs of the Gifted	(3)
EDSE 660	Teaching the Gifted	(3)
EDSE 663	Teaching Early Childhood Special Education	(3)
EDSE 564	Managing Inappropriate Classroom Behavior	(3)
EDSE 568	Teaching Academics to the Mildly Disabled	(3)
EDSE 569	Managing Transitions for Exceptional Children	(3)
EDSE 571	Teaching Individuals with Severe Disabilities	(3)
EDSE 580	Technology in Special Education	(3)
EDSE 690	Practicum in Special Education	(3)
EDSE 691	Problems and Projects in Special Education	(3)
EDSE 692	Problems and Projects in Special Education	(3)
EDSE 693	Problems and Projects in Special Education	(3)
EDSE 791a	Seminar in Special Education/ Selected Topics	(3)
EDSE 791b	Seminar in Special Education/ Selected Topics	(3)
EDSE 791c	Seminar in Special Education/ Selected Topics	(3)
EDSE 791d	Seminar in Special Education/ Selected Topics	(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 810	DOCTORAL DISSERTATION

Once students begin the dissertation, they must register for EDCI 810 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 a fully 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 25 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 32. If the GPA is between 2.0 and 2.24, the GRE score must be 1,000 or the MAT score 39. 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. An exception is the concentration in Adult Education.

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 500	Foundations of Education	(3)
	or	
EDCI 526	Philosophy of Education	(3)
EDCI 511	Research and Statistics in Education	(3)
EDCI 610	Curriculum and Planning and Programming	(3)
EDCI 530	Multicultural Education	(3)
PSY 543	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 534	Evaluation of Education Programs	(3)
EDCI 525	Seminar in Secondary Education	(3)
EDCI 586	Values Education	(3)
EDCI 613	Seminar in Curriculum	(3)
EDCI 528	Middle School Curriculum	(3)
EDCI 619	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)

EDCI 504	The Adult Learner	(3)
EDCI 518	Principles and Techniques for Teaching Adults	(3)
EDAD 535	Parental Involvement Education	(3)
EDCI 539	Community Resources for The Elderly	(3)
EDAD 549	Aspects of Aging	(3)
EDRD 650	Reading and Writing for School Administrators K-12	(3)
EDRD 609	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 511	Research and Statistics	(3)
EDCI 526	Philosophy of Education	(3)
PSY 543	Advanced Educational Psychology	(3)

Concentration: Reading Education - 9-10 Hours

EDRD 561	The Teaching of Reading in Grades K-8	(3)
EDRD 564	Diagnosis and Treatment of Reading Disabilities	(3)
EDRD 569	Practicum in Reading Education	(3)
EDRD 580	Linguistic Applications to Teaching Language Arts	(3)
EDRD 603	Reading-Language Arts Curriculum in Elementary, Middle, and Secondary Schools	(3)
EDRD 605	Strategies for Developing Reading-Study Skills in Middle and Secondary Schools	(3)
EDRD 612	Current Trends and Issues in Reading-Language Arts Education	(3)
EDRD 620	Directed Individual Study of Instructional Strategies in Reading	(1-3)

Secondary School Emphasis

Professional Educational Core - 9 Hours

EDCI 511	Research and Statistics	(3)
EDCI 526	Philosophy of Education	(3)
PSY 543	Advanced Educational Psychology	(3)

Concentration: Reading - 9-10 Hours

EDRD 580	Linguistic Applications to Teaching Language Arts	(3)
EDRD 603	Reading-Language Arts Curriculum in Elementary, Middle, and Secondary Schools	(3)
EDRD 605	Strategies for Developing Reading-Study Skills In Middle and Secondary Schools	(3)
EDRD 609	Teaching Adults to Read and Write	(3)
EDRD 612	Current Trends and Issues in Reading-Language Arts Education	(3)
EDRD 620	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 618	Microcomputers for Primary & Elementary Schools	(3)
EDCI 619	Microcomputers and Educational Services	(3)
EDCI 573	Audio Visual Education	(3)
EDCI 592	Problems and Projects in Education	(3)
	Guided Electives (6 hours)	
EDAD 610	The Computer and Educational Administration	(3)
EDAD 606	The Administration of Instructional Programs and Materials	(3)
CS 505	Advanced Computer Programming	(3)
MATH 573	Logic I	(3)

CONCENTRATION: TEACHING NON-ENGLISH BACKGROUND (NELB) STUDENTS - 12 hours

EDCI 501	Issues in Bilingual Education & Second Language Acquisition	(3)
ENG 513	Teaching English to Speakers of Another Language, I	(3)
ENG 514	Teaching English to Speakers of Another Language, II	(3)
EDCI 592	Problems & Projects in Education (Supervised Teaching in ESL)	(3)

NELB Guided Electives (6 hours)

EDCI 502	Teaching English Structure to Non-Native Speakers of English	(3)
EDCI 503	Teaching and Assessment of Non-Native Speakers of English	(3)
EDCI 580	Linguistics Applications to Teaching Language Arts	(3)
EDCI 510	History of the English Language	(3)
SOC 528	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

1. A minimum Graduate Record Exam (GRE) score of 870 (Verbal & Quantitative), or a minimum Miller Analogies Test (MAT) score of 25.
2. A minimum G.P.A. of 2.5 on the baccalaureate degree.

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. An exception is the concentration in Adult Education.

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 500	Foundations of Education	(3)
	OR	
EDCI 526	Philosophy of Education	(3)
EDCI 511	Research and Statistics in Education	(3)
PSY 543	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 561.

EDCI 527	Advanced Social Studies	(3)
EDCI 529	Advanced Language Arts	(3)
EDCI 634	Evaluation of Education Programs	(3)
EDCI 582	Advanced Mathematics in the Elementary School	(3)
EDCI 583	Advanced Science in the Elementary School	(3)
EDCI 586	Values Education	(3)
EDCI 610	Curriculum Planning and Programming	(3)
EDCI 615	Seminar in Curriculum Development	(3)
EDCI 618	Microcomputer Technology in Primary and Elementary Schools	(3)
EDCI 630	Multicultural Education	(3)

Electives with consent of the advisor - 6 hours

CONCENTRATION:
EARLY ELEMENTARY AND MIDDLE SCHOOL READING

EDRD 561	Teaching Reading K-8	(3)
EDRD 564	Diagnosis and Treatment of Reading Disabilities	(3)
EDRD 569	Practicum in Reading Education	(3)
EDRD 580	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.

Students my elect to complete the M.Ed. In Special Education leading to State Licensure or complete the M.Ed. Non-Licensure program.

Admission requirements

1. A minimum Graduate Record Exam (GRE) score of 870 (Verbal & Quantitative), or a minimum Miller Analogies Test (MAT) score of 25.
2. A minimum G.P.A. of 2.5 on the baccalaureate degree.

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 12 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 - 12 hours

EDSE 554	Theory and Procedures for Teaching Exceptional Children	(3)
EDAD 502	Philosophy and Introduction to School Administration	(3)
EDCI 526	Philosophy of Education	(3)
EDCI 511	Research and Statistics in Education	(3)
OR		
EDAD 511	Research and Statistics	(3)

Specialized Core Courses Required for Licensure

EDSE 553	Education and Psychology of Exceptional Children	(3)
EDSE 554	Theory and Procedures for Teaching Exceptional Children	(3)
EDSE 556	Psycho-Educational Diagnosis of the Exceptional Child	(3)
EDSE 557	Consultation and Collaboration	(3)
EDSE 558	Learning and Behavioral Disabilities	(3)
EDSE 568	Teaching Academics to the Mildly Disabled	(3)
EDSE 569	Managing Transitions of Exceptional Persons	(3)
EDSE 580	Technology in Special Education and Rehabilitation	(3)
*EDSE 595	Student Teaching (12 hours for initial license; 6 hours for an add-on endorsement in Special Education	(6-12)
*EDSE 596	Internship in Special Education	(12)

(*EDCI 470 must be taken concurrently with either of these courses.)

Additional Courses Required for Licensure in Special Education

EDRD 561	Teaching Reading in Elementary School	
OR		
EDRD 605	Strategy for Developing Reading Study Skills	(3)

With the 12 hours from the required professional core above, and 24 hours from one of the three options listed below, the credit hour requirement for the master's degree are met. Option A is for students not interested in obtaining a teaching license. Option B is for those who are licensed in another area and wish to add special education to the license. Option C is for students who have no teaching license.

Non-Licensure Option

Admission Requirements

Unconditional admission to the M.Ed. program requires the applicant to have a bachelor's degree from a fully 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 25 on the Miller Analogies Test.

Choose 8 courses. (24 Hours)

Students who are licensed in special education may take electives in a related field, with the advisor's approval. With a sound inter-disciplinary proposal, up to 12 hours could be taken in a related field, at the advisor's discretion.

EDSE 537	Characteristics and Strategies for the Physically Challenged	(3)
EDSE 552	Organization and Administration of Programs and Services for Exceptional Persons	(3)
EDSE 553	Education and Psychology of Exceptional Children	(3)
EDSE 554	Theory and Procedures for Teaching Exceptional Children	(3)
EDSE 555	Characteristics of Young Exceptional Children	(3)
EDSE 556	Psycho-Educational Diagnosis of Exceptional Children	(3)
EDSE 557	Consultation and Collaboration	(3)
EDSE 558	Learning and Behavior Disabilities	(3)
EDSE 559	Characteristics and Needs of the Gifted	(3)
EDSE 560	Teaching the Gifted	(3)
EDSE 563	Teaching Early Childhood Education	(3)
EDSE 564	Managing Inappropriate Classroom Behavior	(3)
EDSE 568	Teaching Academics to the Mildly Disabled	(3)
EDSE 569	Managing Transitions of Exceptional Persons	(3)
EDSE 571	Teaching Individuals with Severe Disabilities	(3)
EDSE 572	Medical Aspects of Exceptionality	(3)
EDSE 580	Technology in Special Education and Rehabilitation	(3)
EDSE 591, 592,593	Problems and Projects in Special Education	(3)

B. The Endorsement Curriculum is for persons wanting to add Special Education Modified K-12 to an existing Tennessee professional teaching license.

EDSE 553	Education and Psychology of Exceptional Children	(3)
EDSE 554	Theory and Procedures for Teaching Exceptional Children	(3)
EDSE 556	Psycho-Educational Diagnosis of the Exceptional Child	(3)
EDSE 557	Consultation and Collaboration	(3)
EDSE 558	Learning and Behavior Disabilities	(3)
EDSE 564	Managing Inappropriate Classroom Behavior	(3)
EDSE 568	Teaching Academics to the Mildly Disabled	(3)
EDSE 569	Managing Transitions of Exceptional Persons	(3)
EDSE 580	Technology in Special Education and Rehabilitation	(3)
EDSE 590 OR	Practicum in Special Education	(3)
*EDSE 595 OR	Student Teaching with Exceptional Children	(3 - 6)
*EDSE 596	Internship in Special Education	(3 - 6)

(*EDCI 470 must be taken concurrently with either of these courses.)

C. 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 553	Education and Psychology of Exceptional Children	(3)
EDSE 554	Theory and Procedures for Teaching Exceptional Children	(3)
EDSE 556	Psycho-Educational Diagnosis of the Exceptional Child	(3)
EDSE 557	Consultation and Collaboration	(3)
EDSE 558	Learning and Behavior Disabilities	(3)
EDSE 564	Managing Inappropriate Classroom Behavior	(3)
EDSE 568	Teaching Academics to the Mildly Disabled	(3)
EDSE 569	Managing Transitions of Exceptional Persons	(3)
EDSE 580	Technology in Special Education and Rehabilitation	(3)
EDRD 561 OR	Teaching Reading in Elementary School	(3)
EDRD 605	Strategy for Developing Reading	(3)
*EDSE 595 OR	Student Teaching of Exceptional Children	(3 - 6)
*EDSE 596	Internship in Special Education	(3 - 6)

(*EDCI 470 must be taken concurrently with either of these courses.)

COURSE DESCRIPTIONS

EDCI 501. 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 502. 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 503. 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 511. 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 526. 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 527/627. ADVANCED SOCIAL STUDIES. (3) Designed for students who desire to explore newer practices and materials for the social studies program in elementary schools.

EDCI 528/628. 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 529/629. ADVANCED LANGUAGE ARTS. (3) A study of current trends and practices in teaching the language arts in elementary.

EDCI 530/630. 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 531. 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 531A. 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 534/634. 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 535. INTERNSHIP IN SECONDARY SCHOOL. (3) Designed for those students seeking licensure but are already teaching in a State-approved K-12 school.

EDCI 573. 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 582/682. ADVANCED MATHEMATICS IN THE ELEMENTARY SCHOOL. (3) Current developments in elementary science programs. Emphasis is placed on of "modern math," curriculum, classroom methods and techniques, evaluation procedures, and teacher training.

EDCI 583/683. 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 586/686. 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 591, 592, 593. 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 595. 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 610. 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 613. 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 615. 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 617. 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 618. 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 620. 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 700. 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 included in the treatment of philosophy.

EDCI 702. 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 703. 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 708. CURRICULUM THEORY. (3) A course that explores the historical development of curriculum theory and the evolutionary process that leads to contemporary curricula today.

EDCI 711. SEMINAR IN INSTRUCTION. (3) A seminar in the current issues, trends, and research in classroom instruction.

EDCI 712. 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 714. 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 787. 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 810. 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 531. IN-SERVICE EDUCATION WORKSHOPS. (1-3) Workshops designed to address a variety of reading education topics.

EDRD 650. 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 559. FOUNDATIONS OF TEACHING READING. (3) Survey and analysis of theory, concepts, principles, processes, practices, and materials relevant to reading programs kindergarten through adult.

EDRD 561. 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 564. 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 569. 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 580. 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 587. 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 603. 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 605. 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 609. 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 612. 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 620. 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 621. 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 622. 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 702. 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 710. 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 720. 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 537/637. 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 552/652. 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 553/653. 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 554/654. 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 555. 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 556/656. 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 553 and 558 or consent of instructor.

EDSE 557/657. 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 558/658. 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 559/659. 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 560/660. 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 563/663. 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 553, 558, 554, and 555 or consent of instructor.

EDSE 564. MANAGING INAPPROPRIATE CLASSROOM BEHAVIOR. (3) Theories, goals and intervention strategies for serving exceptional learners with mild to severe behavior disorders. Field experiences are required. Prerequisites: EDSE 553, 558, and 554 or consent of instructor.

EDSE 568. 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 553, 558, and 554 or consent of instructor.

EDSE 569. 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 571. 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 553, 554, 537 or 558, or consent of instructor.

EDSE 572. 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 580. 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 590/690. 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 special education teaching license. Prerequisite: Completion of course work or consent of instructor.

EDSE 591, 592, 593, 691, 692, 693. 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 595. STUDENT TEACHING OF EXCEPTIONAL CHILDREN. (6-12) Observation and supervised practicum with children and youth with mild disabilities. Prerequisite: Admission to Teacher Education.

EDSE 596. 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.

EDSE 791. 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

Fannie Cathey, Professor
B.S., 1968, Mississippi Valley State University; M.Ed., 1973, University of Houston; Ph.D., 1980, George Peabody College of Vanderbilt University

Charles Dickens, Associate 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

Robert Emans, Professor
B.S., 1957, University of Wisconsin/Madison; M.A., 1958, University of Chicago; Ph.D., 1963, University of Chicago

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

Judith Presley, Assistant Professor
B.S., 1969, Tennessee State University; M.S., 1974, Tennessee State University; Ph.D., 1998, George Peabody College of Vanderbilt

Richard O. Renfro, Professor
B.Ed., 1961, Illinois State University; M.Ed., 1963, Illinois State University; Ed.D., 1969, Indiana University

Dean B. Roberts, Professor
B.S., 1961, Northwest Missouri State University; M.A., 1968, Northwest Missouri State University; Ed.D., 1974, University of Kansas

Grenetta Simpson, Associate Professor
B.S., 1957, Alabama State University; M.A., 1960, Columbia University; Ed.D., 1983, George Peabody College of Vanderbilt University

Wade Smith, Assistant Professor
B.S., 1985, Columbus College; M.Ed., 1987, Texas Tech University; Ed.D., 1998, Texas Tech University

Carole F. Stice, Professor
B.S., 1966, Murray State University; M.S., 1968, Murray State University: Ph.D., 1974, Florida 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
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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
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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 industrial 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 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 uncondi-

tional 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

An 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 course cores 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 Coordinator 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. The curriculum consists of a required core (18 semester credit hours), a dissertation (21 credit hours), a concentration (18 credit hours), and electives (15 credit hours).

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 501	Data Structures and Algorithms	3
CISE 502	Computer Architecture and Operating Systems	3
CISE 503	Software Systems Design	3
CISE 504	Systems Engineering	3
CISE 522	Computer Aided Systems Design	3
CISE 523	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 506	Error Correction Codes	3
CISE 524	Management of Information Systems	3
CISE 531	Probability & Statistics, Risk Management and Forecasting	3
CISE 600	Database Management Systems	3
CISE 610	Optimization in Operations Research	3
CISE 630	Statistical Information Theory	3
CISE 634	Computer Communication and Networks II	3
CISE 636	Distributed Computing Theory and Design	3
CISE 644	Numerical Visualization	3
CISE 710	System Modeling and Simulation	3
CISE 730	Network Programming	3
CISE 731	Metrics and Models in Software Quality Engr.	3
CISE 734	High Performance Computing Applications	3
CISE 735	Network Security and Risk Analysis	3
CISE 737	Optical Communication	3
CISE 750a	Special Topics	3

Control System and Signal Processing

EE 521	Digital Filter Design	3
EE 522	Modern Signal Processing	3
EE 523	Digital Image Processing I	3
EE 563	Modern Control Systems	3
CISE 620	Introduction to Computational Intelligence	3
EE 622	Robust Control Theory	3
EE 623	Nonlinear Control Systems	3
EE 625	Digital Spectral Analysis	3
EE 626	Pattern Recognition and Classification	3
EE 720	Statistical Signal Processing	3
EE 721	Adaptive Control Systems	3
EE 722	Intelligent Control Systems	3
EE 723	Adaptive Filtering and Stochastic Control Systems	3
CISE 724	Digital Image Processing II	3
CISE 750b	Special Topics	3

Robotics and Computer Integrated Manufacturing

ME 501	Introduction to Manufacturing	3
ME 504	Vibration Analysis	3
ME 513	Flexible Manufacturing Systems	3
ME 543	Intro. to Computational Fluid Dynamics	3
ME 561	Computer Aided Design and Manufacturing	3
ME 562	Design for Manufacturability	3
ME 563	Manufacturing Quality Control and Managem.	3
ME 564	Manufacturing Modeling and Simulation	3
ME 565	Predictive and Preventive Maintenance	3
ME 566	Concurrent Engineering in Manufacturing	3
CISE 640	Fundamentals of Robotics in Manufacturing	3
ME 643	Manufacturing Diagnosis and Prognosis Tech.	3
CISE 644	Numerical Visualization	3
ME 645	Transport Phenomena in Manufacturing	3
CISE 742	Robotics and Machine Intelligence in Manufact	3
CISE 743	Mechatronics Systems	3
CISE 750c	Special Topics	3

Ph.D. Dissertation (21 semester credit hours)

CISE 790	Ph.D. Dissertation	21

Seminar (0 semester credit hours registration for two semesters is required)

CISE 760	Seminar	0

MAJOR: ENGINEERING

DEGREE: MASTER OF ENGINEERING

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 production and operations management, 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 502	Optimization Methods for Engineers	3
MG 606	Production and Operations Management	3
ENGR 550	Special Problems	3

Either of the following three-hour courses

ENGR 510	Methods of Applied Mathematics for Engineers I	3
ENGR 515	Numerical Methods for Engineers	3

CONCENTRATION I: BIOMEDICAL ENGINEERING

Mohammed Bodruzzaman, Ph.D.
Professor, ECE

Areas of Specialization

Biomedical Core Courses - 15 hours

BIO 524	Systemic Physiology	3
BIO 726	Neurobiology	3
BME 501	Introduction to Biomedical Engineering	3
BME 502	Biotechnology and Instrumentation	3
BME 503	Medical Imaging and Signal Processing	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

CE 505	Transportation Modeling	3
CE 509	Traffic Engineering	3
CE 510	Pavement Design	3
CE 513	Airport Planning and Design	3
CE 520	Advanced Geometric Design of Highways	3

Electives with the consent of the advisor - 6 hours

AE 510	Computer Codes	3
CE 514	Urban Mass Transit	3
CE 542	Advanced Foundation Engineering	3
CE 543	Applied Soil Mechanics	3
CE 564	Transportation Systems Evaluation Procedures	3
CE 574	Elasticity	3
CE 577	Theory of Plates and Shells	3
CE 578	Finite Element Analysis	3

B. Structural Engineering

Core Courses - 15 hours from courses listed below

AE 510	Computer Codes	3
CE 570	Plastic Design in Steel	3
CE 571	Advanced Reinforced Concrete Design	3
CE 572	Composite Structural Design	3
CE 573	Matrix Analysis of Structures	3
CE 574	Elasticity	3
CE 575	Stability and Vibration of Structures	3
CE 576	Advanced Indeterminate Structures	3
CE 577	Theory of Plates and Shells	3
CE 578	Finite Element Analysis	3
CE 579	Reinforced Masonry Design	3
CE 580	Advanced Steel Design	3

Electives with the consent of the advisor - 6 hours

CONCENTRATION III: ENVIRONMENTAL ENGINEERING

Farouk Mishu, Ph.D., P.E., Head

Core Courses - 15 hours listed below:

CE 529	Air Pollution Control	3
CE 530	Environmental Engineering Processes I	3
CE 531	Environmental Engineering Processes II	3
CE 534	Industrial Waste Treatment and Disposal	3
CE 537	Environmental Chemistry	3

Electives with the consent of the advisor - 6 hours

CE 527	Ground Water Contamination	3
CE 528	Solid Waste Management	3
CE 532	Environmental Engineering Design	3
CE 533	Water Quality Management	3
CE 535	Hazardous Waste Management	3
CE 536	Environmental Engineering Laboratory	3
CE 538	Environmental Impact Analysis	3
CE 546	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:

EE 501	Information Theory	3
EE 503	Artificial Neural Networks	3
EE 521	Digital Filter Design	3
EE 522	Modern Signal Processing	3
EE 523	Digital Image Processing	3

Electives with the consent of the advisor - 6 hours

B. CONTROL SYSTEMS

Core Courses - 15 hours from courses listed below:

EE 503	Artificial Neural Networks	3
EE 521	Digital Filter Design	3
EE 560	Optimal Control Methods for Engineering Design	3
EE 563	Modern Control Theory	3
EE 564	Advanced Digital Control Systems	3
EE 622	Robust Control Theory	3

Electives with the consent of the advisor - 6 hours

C. ELECTRICAL POWER SYSTEMS

Core Courses - 15 hours from courses listed below:

EE 503	Artificial Neural Networks	3
EE 521	Digital Filter Design	3
EE 530	Computer Applications to Power System	3
EE 531	Power System Relaying	3
EE 532	Surge Phenomenon in Power Engineering	3
EE 533	Special Topics in Power Engineering	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:

ME 502	Optimization Methods for Engineering Design	3
ME 503	Artificial Neural Networks	3
ME 505	Energy Conversion Systems	3
ME 531	Dynamics and Thermodynamics of Compressible Fluid Flow	3
ME 540	Conduction and Radiation Heat Transfer	3
ME 541	Convection Heat Transfer	3
ME 542	Advanced Thermodynamics	3
ME 578	Finite Element Analysis	3
ME 582	Principles of Design	3

Electives with the consent of the advisor - 6 hours

B. MACHINE DESIGN

Core Courses - 15 hours from courses listed below:

ME 502	Optimization Methods for Engineering Design	3
ME 503	Artificial Neural Networks	3
ME 504	Vibration Analysis	3
ME 510	Theory of Viscoelasticity and Applications	3
ME 511	Theory of Plasticity and Applications	3
ME 512	Manufacturing Tribology	3
ME 520	Advanced Dynamics	3
ME 532	Lubrication	3
ME 578	Finite Element Analysis	3
ME 582	Principles of Design	3

Electives with the consent of the advisor - 6 hours

CONCENTRATION VI: MANUFACTURING ENGINEERING

Decatur Rogers, Ph.D., P.E., Acting Head

Core Courses - 15 hours from courses listed below:

ME 501	Introduction to Manufacturing	3
ME 513	Flexible Manufacturing Systems	3
ME 561	Computer-Aided Design and Manufacturing	3
ME 562	Design for Manufacturability	3
ME 563	Manufacturing Management and Control	3
ME 564	Manufacturing Modeling and Simulation	3
ME 565	Predictive and Preventive Maintenance	3
ME 566	Concurrent Manufacturing	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
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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 501	Data Structures and Algorithms	3
CISE 502	Computer Architecture & Operating System	3
CISE 503	Software Systems Design	3
CISE 504	Systems Engineering	3
CISE 522	Computer Aided System Design	3
CISE 523	Computer Communication and Networks	3
CISE 590a	Master of Science Thesis I	3
CISE 590b	Master of Science Thesis II	3

Two Electives from the list below with the consent of advisor - 6 credit hours

CISE 505	Advanced Discrete Mathematics	3
CISE 506	Error Control Codes	3
CISE 511	Artificial intelligence/Expert Systems	3
CISE 524	Management of Information Systems	3
CISE 530	Robotics and Automation	3
CISE 540	Special Topics in CISE	3
EE 501	Information Theory	3
EE 503	Artificial Neural Networks	3
EE 524	Digital Communication	3

Electives will be selected with the consent of the advisor and approval by the department head.

COURSE DESCRIPTIONS

ENGINEERING

ENGR 510. 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 303 or equivalent.

ENGR 515. 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 340 or equivalent.

ENGR 530. 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 320 or equivalent.

ENGR 550. SPECIAL PROBLEMS. (3) Industry-oriented design project coupled with oral presentation and a written report. Prerequisite: consent of advisor.

ENGR 560-A-B-C. (3) Special subject presented to cover current problems of unique advances in the leading edge of techniques to technology transfer.

BIOMEDICAL ENGINEERING (BME)

BME 501. INTRODUCTION TO BIOMEDICAL ENGINEERING (3) A multidisciplinary course of biomedical engineering which include: a historical perspective, basics of anatomy & 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: BME 460 or equivalent.

BME 502. BIOTECHNOLOGY AND INSTRUMENTATION (3) Introduction to biomedical instrumentation and measurement, basic theories of measurement, electrode, sensors and transducers, bio-electric amplifiers, the human respiratory systems and its measurement, medical laboratory instrument, electrical safely in the medical environment, computers in biomedical equipment, radiology and nuclear medicine equipment. Laboratory experience in the department of respiratory therapy and Meharry Medical College will be the major part of this course. Prerequisites: BME 501.

BME 503. 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: EE 320, EE 521 or equivalent.

CIVIL ENGINEERING

AE 510. COMPUTER CODES. (3) Computer Codes as related to analysis and design of architectural, civil, electrical and mechanical engineering systems.

CE 502. 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.

CE 505. 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.

CE 509. TRAFFIC ENGINEERING. (3) A study of traffic congestion, capacity, signs and signalization, accident analysis and pedestrian controls using MUTCAD guidelines.

CE 510. 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.

CE 513. 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).

CE 514. 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.

CE 520. 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.

CE 527. 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.

CE 528. 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.

CE 529. 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.

CE 530. 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: CE 425.

CE 531. 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: CE 425.

CE 532. ENVIRONMENTAL ENGINEERING DESIGN. (3) Theory and design of structures for collection, purification, distribution, and disposal of water and wastewater.

CE 533. 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.

CE 534. 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.

CE 535. 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.

CE 536. ENVIRONMENTAL ENGINEERING LABORATORY. (3) Basics of wet chemical analysis of water samples; titrametric and spectrometric analysis; evaluation of processes such as coagulations, thickening, adsorption, gas transfer, etc. Prerequisite: CE 425, CE 530 or CE 531.

CE 537. 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.

CE 538. 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.

CE 540. 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: CE 313 or equivalent.

CE 541. 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: CE 313 or equivalent.

CE 542. ADVANCED FOUNDATION ENGINEERING. (3) Subsoil investigation, shallow foundations. Analysis and design of retaining walls, piles and pile foundations. Prerequisite: CE 444 or equivalent.

CE 543. 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: CE 313 or equivalent.

CE 545. APPLIED ROCK MECHANICS. (3) Dynamic response to rock media, core-drilling problems, rapid excavation in rock. Case history studies, evaluation of currant theories used in design of tunnels. Prerequisite: CE 313 or equivalent.

CE 546. NUCLEAR CHEMISTRY. (3) This course will involve the charactersticis of nuclides(Isotopes). Radioactive nuclides are those elements having different masses, the same atomic number but unstable nuclei. These basically two different occurances of radioactive nuclei. Prerequisites: Graduate standing.

CE 550. 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: CE 332 or equivalent.

CE 560. 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: CE 313, 332 or their equivalent.

CE 562. 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: CE 464 or equivalent, or consent of instructor.

CE 564. 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: CE 332, ENGR 530.

CE 565. 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: CE 332 or equivalent.

CE 566. 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: CE 464 or equivalent, or consent of instructor.

CE 568. 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: CE 332 or equivalent.

CE 570. 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: CE 344 or equivalent.

CE 571. 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: CE 342 or equivalent.

CE 572. 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: CE 312 or equivalent.

CE 573. 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: CE 341 or equivalent.

CE 574. ELASTICITY. (3) Equations of equilibrium, compatibility and boundary conditions, and their application to pane 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: CE 312 or equivalent.

CE 575. STABILITY AND VIBRATIONS OF STRUCTURES. (3) Bending of prismatic bars under simultaneous action of axial and lateral loads, harmonic motion, free and force 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: CE 341 or equivalent.

CE 576. ADVANCED INDETERMINATE STRUCTURES. (3) Analysis of indeterminate structures, including multi-story frames, bearing wall and shear wall buildings. Analysis of entire structure. Prerequisite: CE 341 or equivalent.

CE 577. 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: CE 312 or equivalent.

CE 578. 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: CE 312 or equivalent.

CE 579. 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: CE 344 or equivalent.

CE 580. ADVANCED STEEL DESIGN. (3) Advanced topics in structural steel design, including composite design, build-up beams, plate girders, and moment resisting colum base plates. Introduction to design of roof trusses, rigid frames, bridges, and multi story buildings. Structural analysis and design of steel structure. Prerequisite: CE 344 or equivalent.

CE 582. 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 501. 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: CS 320, Engr 223 or equivalent.

CISE 502. 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: CS 411 or CS 341 or EE 430 or equivalent.

CISE 503. 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: EE 306L or CS 305 or EE 431.

CISE 504. 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 223L, 320, 340 or equivalent.

CISE 505. 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: CS 320.

CISE 506. 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: CS 320, EE 350 or equivalent.

CISE 511. ARTIFICIAL INTELLIGENCE/EXPERT SYSTEMS. (3) Case studies in artificial intelligence, design and use of expert system shells, etc. This course will be operated as a project oriented course which utilizes many existing artificial intelligence Techniques. Prerequisite: EE 306L. MATH 303, ENGR 340 or equivalent.

CISE 522. 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: EE 310, 310L, CISE 501 and CS 504 or equivalent.

CISE 523. 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: EE 321, EE 350, EE 435 or equivalent.

CISE 524. 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: ME 502, EE 350 or equivalent.

EE 524. 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: EE 330, 350 or equivalent.

CISE 530. ROBOTICS AND AUTOMATION. (3) Transformation techniques, manipulator kinematics, Jacobian, dynamics, position and force controls, robot programming languages and systems, control problems in robotics and industrial automation, numerical controls, computer aided controls. Prerequisite: EE 400 and instructor's approval

CISE 540. 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 590a. 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, defined a 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 590b. MASTER OF SCIENCE THESIS II. (3) Continuation and completion of thesis and oral presentation defense. Prerequisite: CISE 590a.

CISE 600. 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 610. 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 620. 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 630. 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: EE 320 or equivalent.

CISE 634. 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 636. 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 640. 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 644. 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 710. 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 724. 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 recognition 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 730. 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 731. 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 503, CISE 504, or equivalent

CISE 734. HIGH PERFORMANCE COMPUTER APPLICATIONS. (3) Design and analysis of parallel algorithms infixed-connection network and PRAM models. Numerical computations, sorting, and routing. Comparisons of various parallel machine models. Relating machine models to architectural characteristics.

CISE 735. 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 737. 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 742. ROBOTICS AND MACHINE INTELLIGENCE IN MANUFACTURING. (3) Introduction to robot languages and programming techniques, robot modeling and simulation, applied artificial intelligence to robot task planning and manipulation, demonstration of neural networks, fuzzy logic, genetic algorithms, and rule-based system to control of intelligent stationary and mobile robot manipulators, intelligence robot senses, image and speech recognition and classification, robot sensor based communication based, behavior-based coordination and synchronization in time and space. Demonstration of intelligence robotic systems in manufacturing systems. Laboratory design projects required. Prerequisites: CISE 640, or consent of the instructor.

CISE 743. 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 750A, B, C. SPECIAL TOPICS. (3) Covers topics of specific area interest including special research topics. To be approved by advisor and program director.

CISE 760. 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 790A, B, C. CISE PH.D. DISSERTATION. (3) Research in area of specialization to be carried out under the direction of Advisory Committee.

ELECTRICAL ENGINEERING

EE 500. 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: EE 350 or equivalent.

EE 501. 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: EE 350 or equivalent.

EE 502. 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.

EE 503. 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 303, Engr 340 or equivalent.

EE 504. VIBRATION ANALYSIS. (3) Undamped and damped vibrations with one and two degrees of freedom. Methods of solution for no degree of freedom systems. Transient vibration in one degree of freedom systems. Balancing and shirling degrees of shafts. Noise and noise control. Prereq-uisites

EE 510. 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 223 and EE 310.

EE 512. COMPUTER NETWORKS AND DISTRIBUTED PROCESSING. (3) Introduction to computer communication networks, including layered architecture and protocols, date link, network and transport layers, routing and multiple access algorithms, local area network standards, hardware and software aspects of interfacing digital system components.

EE 520. SYSTEM ANALYSIS TECHNIQUES. (3) Methods of analysis of continuous and discrete, stationary and time-varying systems. Convolution, classical solution of dynamic equations, transforms, and matrices are reviewed. Emphasis is on the concepts of state space. Linear spaces, concept of state, modes, controllability, observability, state transition matrix and adjoint systems. Prerequisite: EE 400

EE 521. DIGITAL FILTER DESIGN. (3) A comprehensive treatment of the theory, design and implementation of digital signal processing structures. The sampling, quantization, and reconstruction process. Design of digital filters in both the time and frequency domains. Theory and application of discrete Fourier transforms and the FFT algorithm. Minimum means square error statistical design. Discrete Wiener and Kalman filtering. Application from the communication, control and radar signal processing areas. Prerequisite: EE 350

EE 522. 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: EE 320

EE 523. 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: EE 320. Computer programming course or consent of instructor.

EE 524. 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: EE 330, 350 or equivalent.

EE 530. 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: EE 342

EE 531. 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: EE 342

EE 532. SURGE PHENOMENA IN POWER ENGINEERING. (3) Traveling wave principles for analysis of overvoltages. Methods of protection against overvoltage due to lighting, ground wire shielding, system and tower grounding, lighting arresters. Dynamic overvoltages switching phenomena and system recovery voltages. Coordination of insulation and protective devices. Prerequisite: EE 342

EE 533. 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.

EE 540. NETWORK ANALYSIS. (3) The analysis of active and passive networks, including topological formulas, energy functions, positive real functions, and reliability conditions. Basic techniques of network synthesis. Introduction to non-linear networks. Prerequisite: EE 320

EE 560. 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: EE 400

EE 561. 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: EE 540, ENGR 530

EE 563. MODERN CONTROL SYSTEMS. (3) Analysis and design of multivariable 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: EE 400 or equivalent.

EE 564. ADVANCED DIGITAL CONTROL SYSTEMS. (3) Advanced methods for design and analysis of discrete, stationary and time-varying systems. Data conversion , solution of linear difference equations, discrete transforms, and z-transform are reviewed. Advanced digital control system design techniques using transfer functions and z-transform are studied. Emphasis is on the state-space representation in digital control systems,. State -space approaches to digital compensator and digital filtering designs are also studied. Introduction to discrete-time optimal control and discrete-time system identification are presented. Prerequisite: EE 400.

EE 578. FINITE ELEMENT ANALYSIS. (3) Theoretical basis of the finite element method. The physical and mathematical modeling using various elements. The application of the methods to various engineering problems. The generation of the finite element program.

EE 582. PRINCIPLES OF DESIGN. (3) Development of design theories; design for manufacturability; evaluation of design; redesign principles; case studies.

EE 622. 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 L1 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 L1 optimal control problem are also covered in this course.

EE 623. 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.

EE 625. 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: EE 522 or equivalent.

EE 626. 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.

EE 720. 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: EE 522 and graduate level probability and statistics. Prereq: EE 320.

EE 721. 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.

EE 722. 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.

EE 723. 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

ME 502. 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.

ME 503. 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.

ME 504. VIBRATIONS ANALYSIS. (3) Undamped and damped vibrations with one and two degrees of freedom. Methods of solution for no degree of freedom systems. Transient vibration in one degree of freedom systems. Balancing and shirring degrees of shafts. Noise and noise control.

ME 505. 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 magnetohydrodnyamic (MHD) power generators and systems.

ME 510. THEORY OF VISCOELASTICITY AND APPLICATIONS. (3) Visoelastic phenomena, linear and non-linear theory. Operator equation of state. Relation and creep functions, photo visoelastic examples. Applications to materials selection in design.

ME 511. 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: CE 312

ME 512. 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.

ME 520. ADVANCED DYNAMICS. (3) Dynamics of a point mass and a distributed mass. Dynamic forces on machine elements. Continuous system vibrations, shock waves in solids. Langrange equations and coordinate transforms. A machine elements laboratory problem will be analyzed and design changes discussed as a course project. Prerequisite: MATH 303

ME 531. 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: CE 310

ME 532. 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: CE 310

ME 540. 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: ME 415, MATH 303

ME 541. 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: ME 415, MATH 303

ME 542. 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 303, ENGR 201

ME 578. 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.

ME 582. PRINCIPLES OF DESIGN. (3) Development of design theories; design for manufacturability; evaluation of design; redesign principles; case studies.

ME 501. 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.

ME 513. 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.

ME 561. 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.

ME 562. 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.

ME 563. 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.

ME 564. 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.

ME 565. 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.

ME 566. 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.

ME 643. 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.

ME 645. 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

Juda E. Rozenberg, Professor
B.S., 1963, M.S., 1965, Ph.D., 1967 University of Notre Dame

COMPUTER SCIENCE

Marsha R. Williams, Professor
B.S., 1969, Beloit College; M.S., 1971, University of Michigan; M.S., 1976, Ph.D., 1982, Vanderbilt University

Amiri Gamshadzahi, 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)

Edet Eyao, Assistant Professor
B. Ed.Sc., 1984, University of Benin (Nigeria); PGD, 1988, University of Lagos (Nigeria); Ph.D., 1994, University of Newcastle-upon-Tyne (United Kingdom)

ELECTRICAL ENGINEERING

Satinderpaul Singh Devgan, Professor and Head
B.Sc., 1961, Guru Nanak Engineering College; M.S., 1965, Ph.D., 1970, Illinois Institute of Technology

Mebenin Awipi, Professor
B.S., 1965, Princeton University; M.S., 1966, Columbia University; D.Sc., 1969 Columbia University

Mohammad Bodruzzaman, Professor
B.S., 1977, M.S., 1979, Jahangrinager University; M.S., 1984, Ph.D., 1990, Vanderbilt University

Mohan J. Malkani, Professor and Associate Dean
B.S., 1953, M.S., 1955, Baroda University; M.S., 1964, Mississippii 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, Associate Professor
B.S., 1979, University of Aleppo; M.S., 1986, Ph.D., 1991, Vanderbilt University

MECHANICAL ENGINEERING

Hassan H. Haft, Assistant Professor
B.Sc., 1976, Arya Mehr University of Technology, Tehran; M.S., 1993, University of Southern California; Ph.D., 2000, Vanderbilt University

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, Assistant 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, Associate Professor
B.S., 1983, M.S., 1985, Oklahoma State University; Ph.D., 1989, University of Cincinnati

SCHOOL OF NURSING

SCHOOL OF NURSING

Christine P. Sharpe, Ph.D., R.N. Interim Dean
Office: Home Economics and Nursing 110
Phone: (615) 963-5251

MAJOR: NURSING

DEGREE: MASTER'S OF SCIENCE IN NURSING (M.S.N.)

Barbara E. Brown, Ed.D., R.N. Program Director
Office: Home Economics and Nursing 312
Phone: (615) 963-5252

The School of Nursing offers a Master of Science in Nursing (MSN) degree with two concentrations, one in Family Health Nursing and the other in Holistic Nursing. 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. The graduates of the program will enhance and advance their practice in settings of greatest need.

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 program is to prepare nurses for advanced clinical practice and for nursing leadership 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, 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.

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 like 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 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 NLN accredited baccalaureate nursing program,
4. A current Tennessee R.N. license, and
5. A combined verbal and quantitative score of 900 on the Graduate Record Examination (GRE) or a score of 30 on the Miller's Analogy Test (MAT).
6. A score of 1000 on the GRE or a score of 35 on the MAT may compensate for a GPA between 2.6 and 2.9; students will be evaluated on an individual basis.

Application Materials

Applicants should submit all the required application materials, by March 15th, to the Graduate School

1. Completed Graduate School applications with fee,
2. Two 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 TN 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.

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 870 score on the GRE or 25 on the MAT and have an undergraduate cumulative GPA of 2.6.

Students who are admitted conditionally must meet the following requirements to be considered for unconditional admission status:

1. Completion of 6 hours of non-nursing graduate courses approved by the Program Director, and
2. A grade of "B" or better in each course.

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. The request for review must be submitted by March 15th.

SPECIAL REQUIREMENTS

Special requirements before entering the MSN clinical courses include current CPR certification, professional liability insurance, and meeting OSHA and agency required health requirements.

Retention

Students must earn a minimum of a grade of "B" in all courses required for the degree. Grades of less than "B" are considered failing. They are counted in the cumulative GPA but are not counted in the requirements for the degree.

Progression

The nursing courses are sequential and must be completed according to the approved program of study. Students must earn a minimum of a "B" in the nursing courses to progress in the program.

Students are expected to maintain satisfactory academic progress. Students who do not take nursing courses for two consecutive semesters (Fall - Spring - Summer) are not in good standing and must re-apply to the program. Individual plan of study is designed for part-time students.

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. Students who earn "D's" and "F's" are not eligible to repeat the course.

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 final 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 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.

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 may be eligible to become certified as family nurse practitioners.

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 six (6) semesters of full-time studies with 43 credits required for graduation. 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, pharmotherapeutics, 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.

Students take Nursing Informatics as their first course in the curriculum in order to provide for them the knowledge and skills which are foundational to research and practice in complex primary health care settings. The nursing research course expends upon undergraduate research knowledge. These two courses provide the foundation for their thesis or project investigations.

Courses in the Family Health and Holistic Nursing clinical concentrations assist students to apply clinical management processes, in progressively complex primary health care situations and settings. There are three courses with 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 50 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 Scholarly Project or Thesis as partial fulfillment for graduation.

Scholarly Project

Each student in the MSN program must conduct a scholarly project 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 522 for two consecutive terms (6 hours). Detailed directions for the Scholarly Project may be obtained from one's advisor.

Description of Course Requirements

Foundational Courses (18 hours)

NURS 500	Nursing Theory	3 credits
NURS 502	Research in Nursing Practice	3 credits
NURS 504	Role Development: Theory and Practice	3 credits
NURS 506	Nursing Informatics	3 credits
NURS 508	Holistic Nursing	3 credits
NURS 521	Pathophysiology	3 credits

Major Concentration (16 hours) - Family Nurse Practitioner

NURS 510	Family Health and Nursing Assessment Across the Life Cycle	4 credits
NURS 528	Pharmatherapeutics	3 credits
NURS 512	Advanced Family Health Nursing I	4 credits
NURS 514	Advanced Family Health Nursing II	5 credits

Major Concentration (18 hours) - Holistic Nursing

NURS 510	Family Health and Nursing Assessment Across the Life Cycle	4 credits
NURS 528	Pharmatherapeutics	3 credits
NURS 517	Holistic Nursing Interventions	3 credits
NURS 518	Advanced Holistic Nursing Practicum I	4 credits
NURS 519	Advanced Holistic Nursing Practicum II	4 credits

Electives (3 hours)

NURS 524	Nursing Special Topics	
OR		
Graduate courses in other departments		3 credits

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 listing of graduate level courses in other departments that MSN students can take, without prerequisites, is developed.

Thesis OR Project (6 hours)

NURS 520	Thesis Writing	6 credits
OR		
NURS 522	Scholarly Project	6 credits
		Total 43 credits

COURSE DESCRIPTIONS

Foundational Courses

NURS 500. 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 502. 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 500, 506.

NURS 504. 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 506. Nursing Informatics. (3 credits) This 3 credit course provides students with the foundation for understanding computer based information management systems and their application in complex health care systems to clinical and organizational management and research issues. Three lecture/seminar/laboratory hours each week. No prerequisite.

NURS 508. 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. Prerequisites: Nurs 500, 504.

Major Concentration

NURS 510. 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. Two lecture/seminar and ten laboratory/clinical hours each week. Additionally, pharmatherapeutics and prescription writing are learned by completing 3 semester hours of didactic and applied learning activities. Prerequisites: Nurs 500, 504, 508.

NURS 512. 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 and adolescents. 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. Two lecture/seminar and ten clinical hours each week. Students who plan to seek FNP certification are required to complete an additional ten hours of clinical each week. Prerequisites: Nurs 500, 504, 506, 508, 510.

NURS 514. 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. Three lecture/seminar and ten clinical hours each week. Students who plan to seek FNP certification are required to complete an additional ten hours of clinical each week. Prerequisites: Nurs 500, 504, 506, 508, 510, 512.

NURS 517. 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. Prerequisites: Nurs 500, 502, 504, 506, 508, 510, 528, 521.

NURS 518. 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. Prerequisites: Nurs 500, 502, 504, 506, 508, 510, 528, 517

NURS 519. Advanced Holistic Nursing Practicum II. (4 credits) This four credit course provides students further opportunity to demonstrate intergration of holistic nursing concepts in practice design and theory-based practice and to demonstrate leadership in addressing issues important to holistic nursing. Prerequisites: Nurs 500, 502, 504, 506, 508, 510, 528, 517, 518

NURS 521. 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 amony physiologic processes throughout the body. Prerequisites: Admission to graduate study or permission of the course coordinator.

NURS 528. 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 500, 504, 508, 510.

Electives

Graduate courses in other departments
and/or Nursing Special Topics (NURS 524) 3 credits

Other

NURS 520. 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. Perquisites: Nurs 500, 502, 504, 506, 508, 510, 512, 514, 528.

NURS 522. 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. Perquisites: Nurs 500, 502, 504, 506, 508, 510, 512, 514, 528.

NURS 524 or 526. 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 500, 502, 504, 506, 508, 510, 528.

Graduate Faculty

Margaret S. Anderson, Assistant Professor
BS Psychology, 1986, University of Tennessee, Chattanooga, MS Nursing, 1994, Vanderbilt University, Certified Family Nurse Practitioner by American Nurses Credentialing Center

Marion G. Anema, Professor, Dean
Diploma, 1959, Milwaukee County Hospital School of Nursing: B.S. Nursing, 1967, The University of Iowa: M.A. Nursing, 1972, The University of Iowa: Ph.D. Educational Administration, 1979, The University of Iowa

Barbara E. Brown, Professor, Director MSN Program
B.S.N. Nursing, 1966, D'Youville College, N.Y.: M.S. Nursing, 1968, Wayne State University, Michigan: Ed.D., 1983, Temple University, PA

Lisa Johnson-Flake, Assistant Professor
BS in Pharmacy, 1996, Samford University McWhorter School of Pharmacy, Doctor of Pharmacy, 1997, Samford University McWhorter of Pharmacy

Michael T. Ivy, Assistant Professor
B.A. Biology, 1978, Southern Illinois University; Ph.D. Physiology & Biophysics, 1986, University of Illinois at Chicago

Gary Linn, Professor
B.A. History, 1968, Long Island University: MA. Ibero-American Studies, 1972, University of Wisconsin-Madison: M.S. Sociology, 1974, University of Wisconsin-Madison: Ph.D. Sociology, 1983, University of Wisconsin-Madison

Deanna Naddy, Assistant Professor
BSN, 1962, University of Kansas, MSN, 1971, Vanderbilt University, DSN, 1994, University of Alabama Birmingham, Certified in Bowen Therapy, 1999, Bowen Therapy Academy of Australia, certified in Clinical Hypnotherapist, 1999, Institute of Integrated Healing Arts

Jane Norman, Professor
A.S. Nursing, 1970, University of Tennessee: B.S. Sociology and English, 1972, University of Tennessee: M.S. Nursing, 1976, Vanderbilt University: Ph.D. Higher Education Administration, 1982, Peabody College of Vanderbilt University

Mary Pleas, Professor
B.S. Biology, 1960, Roosevelt University, IL: M.Ed. Education, 1968, Meharry Medical College: M.S. Nursing, 1985, Meharry Medical College: Ed.D. Human Development Counseling, 1989, George Peabody College, Vanderbilt University

Victoria Slater, Assistant Professor
BSN, 1968, University of Texas, MSN 1971, University of Michigan, Ph.D., 1996, University of Tennessee, Knoxville, Certified as Holistic Nurse, 1996, American Holistic Nurses' Association, Certified as Healing Touch Practitioner, 1993, American Holistic Nurses' Association, Certified as Healing Touch Instructor, 1994, American Holistic Nurses' Association

Yvonne Stringfield, Associate Professor
A.A.S., 1972, Thomas Nelson Community College: B.S. Nursing, 1976, Hampton Institute: M.S. Nursing, 1985, Hampton University: Ed.S., 1990, The College of William and Mary: Ed.D., 1993, The College of William and Mary

Edwina Temple, Assistant Professor
BSN, 1995, Tennessee State University, MSN, FNP, 1997, Tennessee State University, Ed.D., candidate, Tennessee State University

Terry Witherington, Assistant Professor
BS N, 1991, University of Tennessee, Memphis, MSN, PNP, 1994, University of Tennessee, Memphis, Certified, As Pediatric Nurse Practitioner 1999-2004, from American Nurses Credentialing Center

CENTER OF EXCELLENCE INFORMATION SYSTEMS ENGINEERING AND MANAGEMENT

Micheal R. Busby, Ph.D., PE
Director
Office: Suite 265 Avon Williams Campus
(615) 963-7012

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.

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 in the Avon Williams Building of TSU's downtown branch campus.

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 through the Center for Systems Science Research (CSSR). Through the Network Resource and Training Site (NRTS) program, NASA also funds internet connectivity to all Tennessee and Kentucky Historically Black Colleges and Universities (HBCUs) as well as the development of distance-learning capabilities among all NRTS sites. Finally, NASA funds education outreach programs at TSU through the Tennessee Space Grant Consortium (TSGC).

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 four 10-inch to 32-inch automatic photoelectric telescopes (APTs) that make highly precise measurements of stellar brightness changes. Three additional 32-inch APTs are under construction as well as 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 nonprofit 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 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. An algorithm to determine an optimal schedule for autonomous robotic telescopes is also under development. The algorithm aims to produce an optimal schedule that drastically improves the quality of astronomical observation as well as utilization of telescopes by fairly allocating users and observation tasks. The Center's advanced control system laboratory is equipped with several state-of-art experiment facilities including the DSPACE driven flexible structures.

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. We work collaboratively with the Advanced Controls Group in various joint projects, especially in the development of an algorithm to determine optimal schedules for automatic telescopes operated by the Center astronomers.

CENTER OF EXCELLENCE FOR RESEARCH AND POLICY ON BASIC SKILLS

Barbara A. Nye, Ph.D.
Executive Director
Office: Suite J Avon Williams Campus
(615) 963-7231

The Center for 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 for Research and Policy on Basic Skills 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.

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 for Research and Policy on Basic Skills continues to expand its research agenda to achieve these goals as a part of Tennessee State University's commitment to excellence.

The Center has three research departments:

Academic Skills Acquisition
Child and Family Studies
School/Community Partnerships

The Center's research departments interface with the University's Bureau of Evaluation and Research Services (BERS). This unit administers projects and programs of a research, service, and academic nature. These provide laboratories and demonstration sites for conducting and disseminating research, promoting innovation, and enhancing collaboration with various agencies and organizations. BERS also provides linkages with funding agencies for accessing additional Center research funding.

Bureau of Evaluation and Research Services (BERS)

Barbara A. Nye, Ph.D.
Executive Director

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 as well as to other organizations. BERS units encompass research demonstration, continuing education, academic instruction, in-service training, consultation, training and public service activities. Several types of activities are administered and conducted through BERS, including activities related to specific grants and contracts, sponsored programs and projects, for example, The Teacher Enhancement and Materials Management (TEMM) Center provides professional development for teachers and school administrators, consultation, and material distribution on systemic change in K-12 science education. Another project manages the Tennessee Multi-age Research Network, which provides professional development experiences in selected public schools. BERS also publishes research reports and educational/training materials. 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 focuses on prevention and early intervention with low-income children and families. The unique project provides and coordinates comprehensive, intensive, and continuous support services to enable families to attain self-sufficiency, while recognizing the integrity and unique needs of families and children. The Tennessee CAREs' unit also administers two of the newly funded (1998) State pilot preschool programs for low-income children. CAREs manages these programs for public school systems. Tennessee CAREs' goals encompass successful health, economic, and educational outcomes, and long-term academic success. 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

The Tennessee Early Childhood Training Alliance (TECTA) Program is part of the Research Policy Center's Child and Family studies research department. TECTA provides management and technical assistance to Tennessee Board of Regents (TBR) institutions and consortia, who serve as subcontractors to implement a state-wide system of certificate and degree training programs for early childhood education teachers and administrators. TECTA includes center-based, family and group home preschool models as well as school age models.

Science and Technology Programs and the National Science Foundation Project

The Center administers a hands-on science and technology consortium involving several Tennessee school systems through the Tennessee Hands-on Science and Technology Consortium (TSTC). Areas of emphasis include teacher and administrator enhancement, material management and evaluation. Additional Center/TSTC projects include school-community and private sector partnerships, and conferences, as well as coordination with state offices and federal projects.

The Center also administers one of the original 26 National Science Foundation's Local Systemic Change (LSC) Projects in partnership with Metro-Nashville Public Schools, and with Rutherford, Sumner, and Williamson County Schools. The project provides professional development for 3400 teachers and 149 elementary and middle schools to reform elementary science instruction. The Center houses a Teacher Enhancement and Materials Management (TEMM) Center which serves a multicounty region, distributing nationally validated science modules and hands-on, inquiry-based training for teachers and principals. The TEMM Center is a state and national model.

State Employee Child Care Center (SECCC)

The state's employee child care center is administered by the BERS through a contract with the state of Tennessee. The Center serves 72 children from 6 weeks through 5 years of age, and meets national accreditation guidelines set by the National Academy of Early Childhood Professionals. SECCC has provided qualified teachers and services to offer a quality early childhood education program for the last decade. SECCC is located at 110 Stockyard Street, in the downtown area.

Head Start State Training Technical Assistance Center

The State Training Center has operated as the principal training resource for Head Start Programs in Tennessee for several years. A variety of academic and continuing education courses and programs as well as training and technical assistance programs are offered to Head Start personnel and parents through contractual arrangements. The Center also provides services on a contractual basis to Head Start agencies and their grantees throughout the United States. Major programs include:

Child Development Associate Training Program

The Child Development Associate (CDA) Training Program is a national credentialing effort to improve the quality of performance of individual staff members in their role as child caregivers. The program emphasizes competency-based instruction, including supervised field experiences. BERS administers the CDA program, and CDA courses are offered through the Department of Family and Consumer Sciences. The CDA program is coordinated with the Tennessee Early Childhood Training Alliance (TECTA) to promote degree preparation. In 1998, the Center's CDA program celebrated credentialing the 100,000th CDA in the USA, who completed her CDA program at TSU.

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. The program was developed through the BERS during a three-year research and evaluation project which resulted in the publication of a competency-based curriculum. In conjunction with the Tennessee Conference on Social Welfare, a Social Service Practitioner's credential is awarded to interns enrolled in the SSCBT program. BERS was funded to implement the program throughout the southeast and also has program adopters in several other states.

Business, Youngsters, Technology, and Education Consortium

Barbara A. Nye, Ph.D.
Director

The Business, Youngsters, Technology, and Education (BYTE) Consortium is a non-profit public service entity which provides the following services in the area of technology and learning: 1) teacher, parent and administrator training, 2) child enrichment classes, 3) research, 4) conferences, 5) technical assistance, and 6) a variety of public-private partnership programs.

The Consortium is administered through the Bureau of Evaluation and Research Services. The BYTE Consortium also sponsors programs which offer credit from the College of Education in the area of technology and learning and conducts statewide preschool projects with microcomputer demonstration sites in schools and preschool classrooms. The BERS has offered many services through its technology and learning laboratory supported through contributions to the BYTE Consortium. An advisory committee works with the Consortium on local, state, regional, and national programs.

School-Age Child Care Technical Assistance Office

Initiated in 1981 through a grant from the Wellsley College Center for Research on Women, this office continues to provide assistance to schools, organizations, and communities in Tennessee and the Southeast who are developing or conducting school-age child care programs. Special workshops, a library of resource material, and on-site technical assistance are available to organizations and community agencies. The office works directly with the editor of School-Age Notes in disseminating information to interested individuals and organizations.

OFFICE OF SPONSORED RESEARCH

Maurice Mills, Ph.D., Director
Office: 114 Agricultural Research and Extension Complex
(615) 963-7631

The Office of Sponsored Research (OSR) provides leadership, information and services to encourage faculty, research associates, adjunct professors, 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. OSR 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 OSR 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 partnerships, collaborations and cooperative agreements
- Guides faculty and staff through the grant application process
- Routes proposals through proper administrative channels for approvals and endorsements
- Maintains university award files
- Assists in matters relating to patents, copyrights and publication agreements
- Maintains application kits, source materials, bulletins, announcements and guidelines
- Disseminates announcements and information through the OSR WEB site at www.tnstate.edu/osr/ on availability and deadlines of external funding sources
- Maintains files on time and effort certifications of PIs
- Coordinates the TSU RISE (Research, Initiation, Supplement and Enhancement) Incentive Program
- Tracks equipment purchased under federal grants and contracts

Strengthening TSU's research infrastructure is a major priority of OSR. 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. Paramount among these activities are the Centers of Excellence, the Cooperative Agricultural Research Program (CARP), Research Infrastructure in Minority Institutions Neuroscience Center, Center for Neural Engineering, and the Center for Health Research. Increasing TSU's capacity to conduct research at the leading edge level, while strengthening its instructional programs and expanding its research infrastructure, is a major on-going goal of the University. The long-range goals of sponsored research with special relevance to this priority are to:

- Increase the capacity of TSU to conduct scientific and technological research and promote creative activity in education,
- Strengthen the Institution's research infrastructure to improve the health status of the United States and the State of Tennessee through enhanced biomedical and biobehavioral research, and
- Improve the quality of education for all TSU students through their meaningful participation in research and special projects.

Tennessee State University conducts research in computer modeling and simulation, biomedical applications of signal processing, hazardous waste management, neural networks, robotics and machine vision, AI/expert systems, fuzzy logic, stress analysis, software engineering, microcircuit packaging and material processing, heat transfer, transportation planning and modeling, and hydraulics.

The University also conducts research in large-scale control and distributed computing systems under stochastic structural perturbations, and light scattering of cylindrically shaped objects from the ocean. On-going research programs in photocatalytic dissociation of water, topology, biostatistics, harmonic analysis, organic synthesis, theoretical chemistry, drug binding to DNA, polymer chemistry, neuroscience, plant genetics, radiation effects on mammalian cells, gene expression, biofeedback, molecular biology, nutrition, liquid crystals, economics, identification of new germ plasm, plant protection and production, and animal physiology are well established research areas at the University.

New advances in research on family violence, statistical AIDS research and computational epidemiology, basic skills research in science education, and international affairs are currently being made. TSU in addition, provides creativity in the arts, foreign languages, journalism, public policy, and multicultural education.

University Administration

OFFICE OF THE PRESIDENT

President ..... James A. Hefner
B.S., 1961 North Carolina A&T; M.A., 1962, Atlanta University; Ph.D., 1971, University of Colorado.

President Emeritus ..... Frederick S. Humphries
B.S., 1957, Florida A&M University; Ph.D., 1964, University of Pittsburgh.

Executive Assistant to the President (Interim) .. Hollis F. Price, Jr.
B.A., 1958 Haverford College; Ph.D., 1972, University of Colorado (Boulder).

Director of Equal Opportunity and Affirmative Action ..... Sandra Keith
B.S., 1991 Vanderbilt University; J.D., 1994, University of Florida.

Director Title III Program (Interim) ..... Dorothy Granberry
B.S, 1966 Tennessee State University; Ph.D., 1972, University of Connecticut.

Director of Internal Audit ..... Norman Michael Batson
B.S., 1986 Auburn University.

Director of Athletics (Interim) ..... Teresa Lawrence-Phillips
B.S., 1980; M.S., 1999, Tennessee State University.

ACADEMIC AFFAIRS

Vice President for Academic Affairs ..... Augustus Bankhead
B.S., 1957, Tennessee A & I State University; M.S., 1958 Tennessee A & I University; Ed.D., 1978 George Peabody College for Teachers.

Associate Vice President for Academic Affairs ..... Vacant

Associate Vice President for Academic Affairs ..... Dennis J. Gendron
B.A., 1965 Merrimack College; M.A., 1968 University of North Carolina; Ph.D. 1975 University of North Carolina.

Assistant Vice President for Academic Affairs ... Cynthia Brooks
B.S.,1979, Fisk University; M.B.A., 1982, Vanderbilt University.

Dean of the Graduate School ..... Helen Reinhold Barrett
B.A., 1965, Barnard College; M.A., 1967, Ph.D., 1970, Southern Illinois University.

Dean of the College of Arts and Sciences ... William D. Lawson
B.A., 1968 Knoxville College; M.A., 1970, Atlanta University; Ph.D., 1978, Iowa State University.

Associate Dean of the College of Arts and Sciences ..... Gloria Johnson
B.A., 1970 Tennessee State University; M.A., 1971, University of Illinois; Ph.D., 1990, University of Tennessee.

Dean of the College of Business ..... Tilden J. Curry
B.A., 1964 Louisiana State University; M.C.P., 1966, University of Cincinnati; Ph.D., 1978, Florida State University.

Associate Dean College of Business ..... Millicent Gray Lownes-Jackson
B.A., 1972 Fisk University; M.B.A., 1975, Ph.D., 1981 Vanderbilt University.

Dean of the College of Education ..... Franklin B. Jones
B.S., 1953, M.A., 1958, Murray State University; Ed.D., 1967, University of Mississippi.

Associate Dean of the College of Education ..... Leslie J. Drummond
B.S., 1974, M.Ed., 1988, Ed.D., 1991, Tennessee State University.

Dean of the College of Engineering, Technology and Computer Science ..... Decatur Rogers
B.S., 1967, Tennessee State University; M.S., 1969, Vanderbilt University; M.S., 1971, Vanderbilt University; Ph.D., 1975, Vanderbilt University.

Associate Dean of the College of Engineering, Technology and Computer Science ..... Mohan Malkani
B.S., 1953, M.S., 1955, Baroda University, India; M.S., 1964 Mississippi State University; Ph.D., 1980, Vanderbilt University.

Dean of the School of Agriculture and Family and Consumer Sciences ..... Troy Wakefield
B.S., 1970 Tennessee State University; M.S., 1973 Tennessee State University; Ph.D., 1979, University of Tennessee in Knoxville.

Dean of the School of Allied Health Professions ..... Kathleen McEnerney
B.S., 1970, M.S., 1976, Long Island University; D.A., 1989, The Catholic University of America.

Assistant Dean of the School of Allied Health Professions ..... G. Pamela Burch-Sims
B.S., 1977, Hampton University; M.A., 1978, University of Tennessee; Ph.D., 1993, Vanderbilt University.

Dean of The School of Nursing (Interim) ... Christine P. Sharpe
B.S.N., 1953, Meharry Medical College; M.A., 1969, George Peabody College; M.S.N., 1979, Vanderbilt University; Ph.D., 1988, Vanderbilt University.

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.

Associate Dean of Admissions and Records ... Carmelia Taylor
B.S., 1973, 1974 M.S., Ed.D., 1993, Tennessee State University.

Director of Institute of Government ..... Ann-Marie Rizzo
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