

# 2015-2017 Graduate Catalog



TENNESSEE  
STATE UNIVERSITY

**TENNESSEE  
STATE UNIVERSITY**

**THE SCHOOL OF GRADUATE STUDIES  
AND RESEARCH**

**2015-2017 CATALOG**

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## **NON-DISCRIMINATION & AFFIRMATIVE ACTION STATEMENT**

Tennessee State University is an EO/AA employer and does not discriminate on the basis of race, color, national origin, gender, gender identity, sexual orientation, age, religion, disability, veteran status, genetic information, or any other legally protected class with respect to employment programs or activities. Tennessee State University is committed to providing the highest quality of employment, education, research, and service. In support of this commitment, the University seeks to ensure that all educational and employment programs are administered in a non-discriminatory manner. The University's non-discrimination and anti-harassment policy is applicable to faculty, staff, applicants for employment, students and applicants for educational programs and other activities. This policy is fundamental to the effective functioning of the University as an institution of teaching, scholarship and public service.

The University has also developed an affirmative action plan to guide in working toward the creation and maintenance of a diverse environment in which students and employees are encouraged to think, work and serve. The affirmative action plan is designed to aid in University compliance with all applicable federal laws and regulations. For more information regarding these policies, please contact the Equal Opportunity and Inclusion ("OEP") at the phone number or address below.

### **TITLE VI OF THE CIVIL RIGHTS ACT OF 1964**

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin in programs or activities receiving federal financial assistance. Examples of the types of discrimination prohibited by Title VI include racial harassment, school segregation, and denial of language services to students who are limited in their English.

To file an employment discrimination/harassment complaint or a Title VI discrimination/harassment complaint, please contact:

Tiffany Cox, Director of Equity and Inclusion  
3500 John Merritt Blvd.  
Ned McWherter Administration Bldg., Ste. 260  
Nashville, Tennessee 37209  
615- 963-7435 (office)  
615-963-7463 (fax)  
[www.tnstate.edu/equity/](http://www.tnstate.edu/equity/)

### **TITLE IX NOTIFICATION GENDER DISCRIMINATION, SEXUAL HARASSMENT, SEXUAL ASSAULT, STALKING & DOMESTIC VIOLENCE**

Title IX of the Education Amendments of 1972 prohibits discrimination based on sex in education programs and activities that receive federal financial assistance. Examples of the types of discrimination that are prohibited under Title IX include sexual harassment, sexual assault/sexual violence, discrimination based on pregnancy and the failure to provide equal opportunity in athletics.

Complaints of violations under Title IX may be directed to TSU's Title IX Coordinator:

Tiffany Cox, Director (Title IX Coordinator)  
Justin Harris, Asst. Director (Deputy Coordinator)  
Equal Opportunity & Affirmative Action Office  
3500 John Merritt Blvd. Ned McWherter Administration Bldg., Ste. 260  
Nashville, Tennessee 37209  
615- 963-7435 (Office)  
615-963-7463 (fax)  
[www.tnstate.edu/equity/](http://www.tnstate.edu/equity/)

For complaints involving student on student sexual harassment, sexual assault/violence, stalking or domestic/dating violence:

Daryl Lowe (Deputy Coordinator)  
Assistant Dean of Students  
Office of Student Conduct and Judicial Affairs  
Floyd-Payne Campus Center, Ste. 103  
615- 963-4891  
<http://www.tnstate.edu/mediation/>

For complaints of gender equity in athletics:

Valencia Jordan (Deputy Coordinator)  
Associate Athletic Director/Senior Women's Administrator Gentry Complex, Room 318  
3500 John Merritt Blvd.  
Nashville, Tennessee 37209  
615-963-5754  
[www.tsutigers.com/](http://www.tsutigers.com/)

Reports of sexual assault/violence may also be reported to:

Tennessee State University Police Department  
3500 John Merritt Blvd.  
Queen Washington Bldg., 2nd Floor  
Nashville, Tennessee 37209  
615-963-5171 (non-emergency)/ 911 (emergency)  
[www.tnstate.edu/police/](http://www.tnstate.edu/police/)

Services are also available in the TSU Counseling Center for individuals seeking assistance with personal decision making, intra/interpersonal relationships, social relations, and crisis issues. The Counseling Center may be contacted at the address or phone number below:

Main Campus Student Success Center/LRC, Ste. 114  
615-963-5611 or [www.tnstate.edu/counseling/](http://www.tnstate.edu/counseling/)

If you want to learn more about your rights, or if you believe that a school, district, college or university is violating Federal law, you may contact the U.S. Department of Education, Office for Civil Rights, at 800-421-3481 or [ocr@ed.gov](mailto:ocr@ed.gov)

#### File a Complaint

Students or prospective students who wish to file a complaint related to accreditation or regarding violations of state law not resolved at the institution may submit a Student Complaint Form to the Tennessee Board of Regents at 1415 Murfreesboro Road, Suite 340, Nashville Tennessee 37217, or by going on line and filing out the form electronically at: <http://www.tbr.edu/contact/StudentComplaintForm.aspx>. Under Tennessee's open records law, all or parts of complaints will generally be available for review upon request from a member of the public. Complaints regarding accreditation can also be made by contacting the Commission of Colleges of the Southern Association of Colleges and Schools, 1866 South Lane, Decatur Georgia 3033 ([www.sacs.org](http://www.sacs.org)).

Complaints of fraud, waste or abuse may be made by email at [reportfraud@tbr.edu](mailto:reportfraud@tbr.edu) or by calling the Tennessee Comptroller's Hotline for Fraud, Waste and Abuse at 1-800-232-5454.

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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.

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

Students who have already made decisions concerning the area of study in which they are interested, such as Education, Business, Nursing, 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 at Avon Williams Campus, in Suite B400, 330 10<sup>th</sup> Avenue North, Nashville, TN 37203 or by phone at (615) 963-7371, or e-mail at [gradschool@tnstate.edu](mailto: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 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 commercial district. It is adjacent to the center of state government: the Capitol, Legislative Plaza, and the Tennessee Supreme Court.

The student population at Tennessee State University is approximately 9,000. The graduate student population numbers approximately 2,000. 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. All 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, land grant, comprehensive urban university of Nashville and Middle Tennessee.

## TENNESSEE STATE UNIVERSITY

### Vision Statement

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

### Mission Statement

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

### Core Values

Tennessee State University maintains the following core values:

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

### Statement of Purpose

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

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

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

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

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

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

Tennessee State University remains committed to the education of a non-racially identifiable student body and promotes diversity and access without regard to race, gender, religion, national origin, age, disability, or veteran status.

## GOALS OF THE SCHOOL OF GRADUATE STUDIES AND RESEARCH

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

## ADMINISTRATION OF GRADUATE PROGRAMS

The Dean of the School of Graduate Studies and Research is the administrative officer for all graduate programs and is responsible to the 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 Dean of the Library, and the Graduate Dean, who is the chairperson. The Appeals Committee of the Graduate Council reviews petitions and appeals submitted by students and faculty concerning admissions, retention and suspension of students.

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

When Colleges/Schools instead of Departments offer degrees, e.g., the Master of Engineering degree in the College of Engineering, Master of Business Administration degree in the College of Business, the college Dean 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. The most current list can be accessed at <http://www.tnstate.edu/graduate/facultylist.aspx>.

## ACCREDITATIONS AND MEMBERSHIPS

Tennessee State University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award the Associate's, Bachelor's, Master's, Specialist in Education, and Doctoral degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Tennessee State University.

### Program Accreditations

#### College of Business

- Business (M.B.A.: The Association for the Advancement of Collegiate Schools of Business)

#### College of Education

- Education (M.S., M.A.Ed., Ed.S., Ed.D.: National Council for Accreditation of Teacher Education (NCATE)
- Psychology (Ph.D. with concentration in Counseling: American Psychological Association (APA)

#### College of Health Sciences

- Nursing (M.S.N.: Accreditation Commission for Education in Nursing)
- Cardio-Respiratory Care Sciences (B.S.: Commission on Accreditation of Allied Health Education)
- Occupational Therapy (MOT: The Master in Occupational Therapy program is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association)
- Physical Therapy (DPT: The Doctor of Physical Therapy program is accredited by the Commission on Accreditation in Physical Therapy Education)

- Public Health (M.P.H.: Council on Education for Public Health)
- Speech Pathology and Audiology (M.S.: Council of Academic Accreditation of the American Speech-Language-Hearing Association)

#### College of Public Service and Urban Affairs

- Public Administration (M.P.A.: The National Association of Schools of Public Affairs and Administration)
- Social Work (M.S.W.: The Council on Social Work Education)

## Institutional Memberships

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

- American Council on Education
- American Psychological Association (APA)
- The Association for the Advancement of Collegiate Schools of Business (AACSB)
- 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)
- Association of Schools of Allied Health Professions
- Aviation Accreditation Board International (AABI)
- The College Board
- Carnegie Project on the Education Doctorate (CPED)
- 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 of Industrial Technology (NAIT)
- National Association for Multicultural Education (NAME)
- National Association of Schools of Art and Design
- National Association of Schools of Music
- National Association of Schools of Public Affairs and Administration
- National Association of State Directors of Teacher Education and Certification (NASDTEC)
- National Association of State Universities and Land-Grant Colleges
- National Collegiate Athletic Association
- National Council for Accreditation of Teacher Education
- National Society of Allied Health
- National University Extension Association
- Ohio Valley Conference
- Organization of Black Airline Pilots (OBAP)

- Southern Business Administration Association
- Southern Regional Education Board
- Teacher Education Council of State Colleges and Universities
- Tennessee Association of Colleges for Teacher Education
- Tennessee Aviation Association (TAA)

- Tennessee College Association
- Tennessee Conference of Graduate Schools
- University Aviation Association (UAA)
- University Council for Educational Administration (UCEA)
- World Council for Curriculum and Instruction (WCCI)



# THE SCHOOL OF GRADUATE STUDIES AND RESEARCH

## THE 2015-2016 ACADEMIC CALENDAR

### FALL SEMESTER 2015

July 1	Priority deadline for applications for Admission to the Graduate School for Fall 2015
August 15	Graduate Student Orientation
August 15	Faculty Institute
August 23	Regular Registration (“MyTSU” - see Class Schedule for details)
August 24	Classes begin
Aug. 24- 28	Late Registration/Schedule Adjustment*
September 7	Holiday — Labor Day
September 21	Last day to file Application for M.Ed., M.P.A., M.P.H. and M.S. Comprehensive Examinations for students graduating in Spring 2016
September 29	Graduate Council Meeting
October 1	Complete applications due for Doctor of Physical Therapy program for Summer 2016
October 27	Graduate Council Meeting
October 4 & 11	DOCTORAL EXAMINATIONS
November 2	Complete Applications Due for Master’s Program in Criminal Justice for Spring 2016
November 4	Last Day to file for Doctoral Examinations for Spring 2016
November 4	Last Day to Defend Theses/Doctoral Dissertations for December 2015 Graduation
November 6	Last Day to withdraw from courses — Office of Records
November 6	Last Day to withdraw from University — University Counseling Center
November 6-7	M.Ed., M.P.A. M.P.H. and M.S. COMPREHENSIVE EXAMINATIONS
November 18	Last Day for Electronic Submission of Theses/Dissertations
November 24	Graduate Council Meeting
Nov. 9-Jan. 13	Registration for Spring 2016
November 23-29	Fall Break & Thanksgiving Holiday
December 1	Complete Applications due for Doctoral Programs in Psychology for Fall 2016 Admission
December 3	Last Day of Classes
December 4-11	Final Examinations for Fall 2015 semester**
December 12	Fall Commencement-See Commencement Site
December 15	Faculty must have posted all grades via “MyTSU”

\*No registration or schedule adjustments for Fall semester 2015 will be allowed after August 28, 2015.

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

This calendar is subject to change at any time prior to or during an academic term as conditions may require.

## SPRING SEMESTER 2016

January 4	University Re-Opens- 8:00 a.m.
January 4	Faculty Reports for Spring Semester
January 7	Faculty Institute
January 18	Holiday – Martin Luther King Day
January 19	Classes Begin
January 19-22	Late Registration/Schedule Adjustment*
January 26	Graduate Council Meeting
February 3	Complete Applications due for Master's Program in Speech and Hearing Science for Fall 2016
February 3	Complete Applications due for Master's Program in Psychology for Fall 2016
Feb 7 & Feb 14	DOCTORAL EXAMINATIONS
February 17	Complete Applications for Master's Program in Occupational Therapy for Fall 2016
February 23	Graduate Council Meeting
February 21	Deadline to file MPA, MPH, M.Ed. & M.S. Comprehensive. Exam for Summer or Fall 2016
March 7- 13	Spring Break
March 15	Complete Applications due for Doctoral Program in Biological Sciences
March 15	Complete Applications due for MSN/RODP Program for Summer 2016
March 17-23	Mid-term Examination Week
March 23	Last Day to file for Doctoral Examinations in June 2016
March 25-26	M.Ed., M.P.A. M.P.H., and M.S. COMPREHENSIVE EXAMINATIONS
March 30	Last day to defend Theses/Dissertation for May 2016 Graduation
March 29	Graduate Council Meeting
April 4-Aug 26	Registration for Summer and Fall 2016
April 1	Last day to withdraw from courses - Office of Records
April 1	Last day to withdraw from University - University Counseling Center
April 13	Last day for electronic submission of Theses/Dissertations for May 2016 Graduation
April 15	Complete Applications Due for Master's Program in Criminal Justice for Summer 2016
April 26	Graduate Council Meeting
April 28	Last day of classes
April 29 – May 6	Final Examinations for Spring 2016 Semester**
May 7	Spring Commencement
May 9	Faculty must have posted all grades via "MyTSU"

\* No registration or schedule adjustments for Spring 2016 will be allowed after January 24, 2016.

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

This calendar is subject to change at any time prior to or during an academic term as conditions may require.

## SUMMER SEMESTER 2016

May 9 - May 30	Maymester
June 6 - July 8	1st Five Week Session
June 2 - August 15	10 Week Session
July 11 - August 15	2nd Five Week Session

## SUMMER SCHEDULE & DEADLINES

April 6 - May 30	Registration, All Summer Sessions (except Maymester)
April 1 - May 30	Registration, All Summer Sessions (except Maymester)
June 5 & 12	DOCTORAL EXAMINATIONS
June 19 & 20	M.Ed., M.P.A. M.S., and M.P.H Comprehensive Examinations
June 20	M.Ed., M.P.H. and M.S. Comprehensive Examinations
July 10	Last Theses/Dissertations defense date for August 2015 Graduation
July 1	Application period for the D.P.T. program begins
July 24	Last day to file for doctoral examinations in Fall 2015
July 24	Last day for Electronic Submission of Thesis/Dissertation for August 2015 Graduation

### Maymester

May 9	Registration - Maymester Only
May 9	Classes begin for 3 Week Session
May 20	Last Day to Withdraw from Courses
May 27	Last Day of Classes
May 30	Faculty must have posted all grades via "MyTSU"

### Session I - Five Week Session

April 2 - May 30	Registration, All Summer Sessions
June 6	Classes Begin
June 6- 48	Late Registration/Drop/Add
June 16	Complete Applications Due for Master's Program in Criminal Justice for Fall 2016
June 24	Last day to withdraw from First-session courses - Office of Records
June 24	Last day to withdraw from University - University Counseling Center
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2016
July 4	Holiday- Independence Day
July 9	Faculty must have posted all grades via "MyTSU"

## Session II - Five Week Session

April 6 May 30	Registration, All Summer Sessions ("MyTSU"- see Class Schedule for details)
July 11	Classes Begin
July 11-15	Late Registration/Schedule Adjustment (Add/Drop)
July 15	Complete Applications Due for Master's Program in Nursing for Fall 2016
July 29	Last day to withdraw from Second-session courses - Office of Records
July 29	Last day to withdraw from the University - University Counseling Center
August 12	Last day of classes
August 15	Faculty must have posted all grades via "MyTSU"

## Full - 10 Week Session

April 6 – May 30	Registration, All Summer Sessions ("MyTSU"- see Class Schedule for details)
June 6	Classes Begin
June 6-8	Late Registration/Schedule Adjustment
June 15	Complete Applications Due for Master's Program in Criminal Justice for Fall 2016
July 1	Priority deadline for applications for admission to the Graduate School for Fall 2016
July 4	Holiday Observed
July 15	Last day to withdraw from courses - Office of Records
July 15	Last day to withdraw from the university - University Counseling Center
July 15	Complete Applications Due for Master's Program in Nursing for Fall 2016
August 12	Last Day of Classes
August 15	Faculty must have posted all grades via "MyTSU"

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

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

**THE 2016-2017 GRADUATE SCHOOL CALENDAR WILL BE POSTED ONLINE IN DUE COURSE:**

[www.tnstate.edu/graduate](http://www.tnstate.edu/graduate)

# 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 Professions 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 celebrated 50 years of Graduate Education.
  - 1994 The Master of Science in Nursing Degree was initiated.
  - 1996 The Psychology doctoral program degree designation changed from Ed.D. to Ph.D.
  - 1997 The Master of Science in Computer, Information, and System Engineering (CISE) was initiated.
  - 1998 The Doctor of Philosophy degree in Biological Sciences was initiated.
  - 1999 The Doctor of Philosophy degree in Computer and Information Systems Engineering was approved.
  - 2004 The School of Allied Professions was changed to the College of Health Sciences
  - 2006 The Doctor of Physical Therapy Program was initiated.
  - 2006 The Master of Occupational Therapy was approved.
  - 2009 The Master of Public Health (M.P.H) was approved.
  - 2009 The Master of Professional Studies (M.P.S) was approved.
  - 2014 The Professional Science Masters (P.S.M) was approved.
  - 2014 The Master of Science (M.S.) in Computer Science was approved.
- Today, Tennessee State University offers twenty four master's degrees, seven doctoral degrees, and eight graduate certificate programs at the graduate level.

GRADUATE DEGREES AND CERTIFICATES AWARDED BY COLLEGE				
COLLEGE	DEPARTMENT	MAJOR/PROGRAM	DEGREE/ CERTIFICATE	CONCENTRATIONS
<b>AGRICULTURE, HUMAN &amp; NATURAL SCIENCES</b>				
	Agricultural Sciences	Agricultural Sciences	M.S.	Animal Science
			M.S.	Plant Science
			M.S.	Agribusiness
			M.S.	Agricultural Education
		Professional Science	P.S.M.	Applied Geospatial Info. Sys.
		Applied Geospatial Information Systems	Certificate	
	Biological Sciences	Biology	M.S.	
		Biological Sciences	Ph.D.	
	Chemistry	Biochemistry	M.S.	
		Chemistry	M.S.	
<b>BUSINESS</b>	Business	Business Administration	M.B.A.	Accounting
			M.B.A.	Healthcare Economics & Management
			M.B.A.	Management of Information Systems
			M.B.A.	Supply Chain Management
			M.B.A.	General MBA
<b>EDUCATION</b>				
	Educational Leadership	Educational Leadership	Ed.D.	K-12 Administration
			Ed.D.	Higher Education Administration
		Instructional Leadership	Ed.S.	Licensure
			Ed.S.	Non-Licensure
		Instructional Leadership	M.Ed.	Licensure
				Non-Licensure
				Career and Technical Education (CTE)
	Psychology	Professional School Counseling	M.S.	PreK-12 School Counseling
		Psychology	M.S.	Counseling Psychology
			M.S.	School Psychology
			Ph.D.	Counseling Psychology
			Ph.D.	School Psychology
	Teaching & Learning	Curriculum & Instruction	M.Ed.	Curriculum Planning.
			M.Ed.	Educational Technology
			M.Ed.	Reading Specialist
			M.Ed.	Secondary School Instruction
			M.Ed.	Teaching Non-English Background (NELB) Students
		Curriculum & Instruction	Ed.D.	Elementary Education
			Ed.D.	Curriculum Planning
			Ed.D.	Reading
			Ed.D.	Secondary Education
			Ed.D.	Special Education
		Advanced Studies in Teaching & Learning	M.Ed./ROCC	Childhood Literacy Reading
		Elementary Education	M.Ed.	
		Special Education	M.Ed.	
		Instructional Leadership	M.Ed.	School Administrator
				Licensure and Non-Licensure Tracks
<b>ENGINEERING</b>				

	Electrical & Computer Engineering	Computer and Information Systems Engineering	Ph.D.	Computer Comm. & Networks
			Ph.D.	Control Systems and Signal Processing
				Robotics and Computer Integrated Manufacturing
		Computer, Information, and Systems Engineering	M.S.	
	Computer Science	Computer Science	M.S.	High-Performance Computing & Bioinformatics
			M.S.	Cyber-Security & Networking
	Engineering	Engineering	M.E.	Biomedical Engineering
			M.E.	Civil Engineering
			M.E.	Environmental Engineering
			M.E.	Electrical Engineering
			M.E.	Mechanical Engineering
			M.E.	Manufacturing Engineering
<b>HEALTH SCIENCES</b>				
	Human Performance and Sport Sciences	Human Performance and Sport Sciences	M.A.Ed.	Exercise Science
			M.A.Ed	Sports Administration
	Nursing	Nursing	M.S.N.	Family Nurse Practitioner
			M.S.N.	Holistic Nursing
			M.S.N.	Nursing Education
		Nursing (online)	M.S.N./ROCC	Family Nurse Practitioner
			M.S.N./ROCC	Nursing Education
			M.S.N./ROCC	Nursing Administration
		Family Nurse Practitioner	Certificate	
		Holistic Nursing	Certificate	
		Nursing Education	Certificate	
	Occupational Therapy	Occupational Therapy	M.O.T.	
	Physical Therapy	Physical Therapy	D.P.T	
	Public Health, Health Administration and Health Sciences	Public Health	M.P.H.	Behavioral Science & Health Education
			M.P.H.	Cultural Competency
	Speech Pathology & Audiology	Speech and Hearing Science	M.S.	
<b>LIBERAL ARTS</b>				
	Criminal Justice	Criminal Justice Administration	M.C.J.	
<b>PUBLIC SERVICE &amp; URBAN AFFAIRS</b>				
	Public Administration	Health Administration and Planning	Certificate	
		Non-Profit Management	Certificate	
		Executive Leadership	Certificate	
		Professional Studies	M.P.S./RODP	Human Resources
			M.P.S./RODP	Strategic Leadership
			M.P.S./RODP	Training and Development
		Public Administration	M.P.A.	
			Ph.D.	
		Social Work	M.S.W.	
<b>GRADUATE SCHOOL</b>				
	Non-Degree Seeking	Advanced Graduate Admission for Undergraduates		

		Teacher Licensure		
		Add-On Endorsement		
		Plus Thirty		
		Pre K-12 School Counseling		
		Certification		
		Other		

## 2015-2016 SPECIAL FEES

<b>SPECIAL FEES PER SEMESTER*</b>	
(Fees subject to change without notice)	
Application Fee (non-refundable, should be included with the application)	\$35.00
Fee Deferment	\$50.00
Bad Check Charge	\$30.00
Comprehensive Exam	\$15.00
Credit/Audit Change	\$10.00
Duplicate I.D. Card (replacement/nonrefundable)	\$10.00
International Student Fee (This is not assessed for the Summer Term)	\$30.00
New Student Orientation (non-refundable)	\$40.00
Late Registration	\$100.00
Library Fines (non-refundable) per day	
Two-week Books \$0.10/day (Grace period of 5 days, 6th day \$0.60)	
Reserve Books (\$0.10 for each additional hour)	
<b>Lost Books -</b>	
List price of book plus a processing fee of	\$5.00
Out-of-print books	\$50.00
Parking (included in General Access Fee)	
Property Damage (Actual Value)	0-\$600
Room Deposit (per semester/non-refundable)	\$100.00
Theses and Dissertations	
Dissertation Continuation	\$25.00
Thesis Continuation	\$25.00
Traffic Fines	\$15.00-\$600.00

\*Fees subject to change without notice

### FEE PAYMENT

Bills Will Not Be Mailed. Access myTSU (<http://myTSU.tnstate.edu>) to view account balances. All fees must be paid at the time of registration unless covered by authorized deferment. Personal check or American Express, MasterCard and Visa credit card payments are accepted on myTSU (<http://myTSU.tnstate.edu>).

It is the policy of Tennessee State University to electronically convert and process all paper checks received via Point of Purchase, mail or drop box using the Automated Clearing House (ACH) Network, under the rules governed by the National Automated Reserve Bank. Personal checks, cashier/bank checks, money orders, or completed Fee Waiver or Employee Discount or Dependent program forms may be mailed to:

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

Payments should be mailed seven days prior to scheduled deadlines. Entering courses without paying fees does not constitute enrollment.

## FINANCIAL REGULATIONS

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

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

Transcripts are sent out only after all financial obligations to the University have been satisfied. Students registering for graduate credit must pay appropriate fees. All laboratory fees must be paid in full. Refer to a printed or online Class Schedule for a given semester for current Financial Regulations.

## PERSONS OVER 60 YEARS OF AGE AND TOTALLY DISABLED PERSONS

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

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

## REFUND POLICY

- I. The refund policy for the fees, outlined in the Fee section of the Class Schedule is outlined below:
  - A. 100% of the fees will be refunded for classes cancelled by the University.
  - B. 100% of the fees will be refunded in case of a student's death.
  - C. No refund of rent, tuition or other fees will be made to students who are dismissed or suspended.
  - D. The parking permit fee is non-refundable.
- II. The refund policy for all other fees is outlined below:
  - A. 100% of the fees will be refunded for drops or withdrawal prior to the beginning of the first day of classes.

- B. 75% of fees will be refunded for drops or withdrawals from the first day of classes through the (14th) fourteenth calendar (including weekends) day of classes.
- C. 25% of fees will be refunded following exhaustion of the 75% period, for a period of time extending 25% of the time period covered by the term. If the refund date falls on the weekend, drops or withdrawals must be processed by the previous Friday.

## APPEALS PROCEDURES FOR FEES AND REFUNDS

A student may appeal the assessment, application, calculation or interpretation of any University fee, charge, deposit, or refund, or any University action connected with fees or charges. Questions should be discussed with personnel in the Bursar's Office. If the student is not satisfied with the resolution of the problem offered by the Bursar's Office, a written appeal can be made to the Associate Vice President for and Finance.

## RESIDENCY CLASSIFICATION

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

The deadline dates are:

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

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

1. Dean of Admissions and Records
2. Vice President for Academic Affairs
3. President of the University
4. Tennessee 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 maintain 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](http://www.fafsa.ed.gov).

### **FEDERAL DIRECT STUDENT LOAN PROGRAM**

A subsidized loan is awarded to students on the basis of financial need, and borrowers are not charged interest until they begin repayment. An unsubsidized loan is awarded to students regardless of financial need, and interest is charged from the time the loan is disbursed. Direct Loans are awarded to regular students enrolled in an eligible program of study at least half time; other general eligibility requirements must be met. For eligibility requirements, borrowing limits, and application process see the Student Guide for Financial Aid (U.S. Department of Education), available in the Financial Aid Office.

### **FEDERAL WORK-STUDY PROGRAM**

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

## **STUDENT AFFAIRS**

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

### **STUDENT HANDBOOK**

The TSU Student Handbook is a means of facilitating communication among the members of the University. It serves as a source of information which will help the student understand his/her privileges, rights, and responsibilities, and university policies. The Student Handbook is published on the University website at: [http://www.tnstate.edu/campus\\_life/](http://www.tnstate.edu/campus_life/). There are a limited number of printed copies available for freshmen and student services in the Office of First Year Students located in the Harold M. Love-Learning Resources Center Building, Room 103.

### **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, on the Main Campus. The phone number is 615-963-5611.

## STUDENT HEALTH SERVICES

The Student Health Service is maintained to safeguard the health of students. The University provides these services in Kean Hall, Room 304, Third Floor, Main from 8 a.m. to 4:30 p.m. Monday through Friday (phone: 615 963-5291). Services include first aid, emergency services, counseling on health problems, referrals, and the communication of pertinent information to consulting physicians, hospitals, clinics and other agencies.

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

## SERVICES FOR STUDENTS WITH DISABILITIES

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

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

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

## HOUSING

On-campus housing is available on a limited basis for graduate students. Information about off-campus housing is available in the Office of Residence Life. The number is 615-963-7256.

## POLICY ON ID CARDS

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

## LIBRARIES AND MEDIA CENTERS

The Martha M. Brown-Lois H. Daniel Library is adjacent to the Floyd-Payne Campus Center. The main library is a three-story, contemporary structure built in 1977. It has 82,000 square feet of space which include a Multimedia Learning Commons that features Apple computers and printers for group or individual projects. Although there are 82 computers available for public use, the online catalog and databases are available remotely and via mobile technology. In addition to its status as a government documents depository, the Library has a Special Collections Department which houses theses, dissertations, and art objects. It also has collections which include documents, artifacts, and memorabilia related to the University's colorful history and its alumni. The Library houses 395,435 book volumes and provides subscriptions to 1,008 print periodicals. It provides access to 183,865 ebooks and 233 databases. The Media Centers on the main and downtown campuses offer state-of-the-art media support which includes podcasting, digital recording and video projects assistance. Access to a full-range of services, including print and electronic books, print and electronic periodicals, and research databases is also available at the downtown Avon N. Williams, Jr. facility.

## TESTING CENTER

Comprehensive testing services are offered to Tennessee State University students, staff, and faculty, as well as to the general public. The testing staff administers and scores a wide range of standardized tests related to counseling, advanced placement, measurement, proficiency testing, undergraduate admissions, and graduate admissions. Location: Holland Hall, Suite 200, 3500 John. Merritt Blvd. (phone: 615-963-5991 or 615-963-7113).

## 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 106, Crouch Hall, 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. It 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. The phone number is 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.

Pi Alpha Alpha (PAA) is the global honor society for Public Affairs and Administration. There are more than 160 chapters located around the world at NASPAA member schools, including Tennessee State University. The purpose of PAA is to encourage and recognize outstanding scholarship and accomplishment in public affairs and administration. Its objectives, such as fostering integrity, professionalism, and effective performance, promote the advancement of quality in the education and practice of the art and science of public affairs and administration. PAA membership is available to those with the highest performance levels completing the University's M.P.A. and Ph.D. in public administration programs. Contact the Department of Public Administration for more information.

## PROFESSIONAL ORGANIZATIONS

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

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

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

Further information is available from the Department of Psychology.

## **ACCESS TO EDUCATIONAL RECORDS**

### **EDUCATIONAL RECORDS**

Educational Records are defined as those records, files, documents, and other materials which (1) contain information directly related to a student; and (2) are maintained by Tennessee State University or by a person acting for the University. "Records" means information recorded in a medium, including but not limited to the following: handwriting, print, tape, film, microfilm, and microfiche. Educational records do not include (1) personal notes, (2) records available only to law enforcement personnel, (3) employment records, (4) medical and psychiatric records (these are accessible by the student's physician). All credentials become the property of the University and will not be forwarded or returned. Credentials will be maintained in active files for a 12 month period after which credentials will be relegated to inactive status and must be submitted again before an admission decision will be made. The applicant is advised to have all credentials on file well in advance (preferably thirty days) of the registration period for the term for which application is made.

### **STUDENT**

A student is any person who is or has been enrolled at Tennessee State University. An applicant who does not enroll or who is declared ineligible has no inherent right to inspect his file.

Wherever "student" is used in reference to personal rights, an eligible parent of a dependent student has similar rights. This "eligible" parent is one who has satisfied Section 52 of the Internal Revenue Code of 1954, and who presents such proof to the custodian of the educational records. Normally, this proof will be written affirmation by the student and the parent declaring that the student is a dependent for federal income tax purposes.

### **DIRECTORY INFORMATION**

Directory information is defined as: "name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student." At the time a student registers for courses, the student may notify the Office of Admissions and Records (this must be done in writing) that directory information for the student may not be released. This notification is effective only for the semester for which the student is then registering.

### **ACCESS**

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

### **RELEASE OF PERSONALLY IDENTIFIABLE STUDENT EDUCATIONAL RECORDS**

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

1. Tennessee State University officials and staff who have legitimate educational interest; Education records and personally identifiable information obtained from those records may be disclosed without the student's consent to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic, research, or staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Regents; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill institutional duties.
2. Officials of other schools in which the student seeks admission;
3. Appropriate persons in connection with a student's application for or receipt of financial aid;
4. Federal or State officials as defined in paragraph 99.37 of the regulations concerning the law;
5. State officials and officials authorized by State statute;
6. Organizations conducting studies for or on the behalf of Tennessee State University for the purpose of assisting in accomplishing the University's stated goals, when such information will be used only by such organizations and subsequently destroyed when no longer needed for the intended purpose;
7. Accrediting organizations to carry out their functions;
8. Parents of dependent students as defined in Section 152 of the Internal Revenue code of 1954 (Written consent may be allowed from either of the separated or divorced parents subject to an agreement between the parents or court order. In the case of a student whose legal guardian is an institution, a party independent of the institution, appointed under state and local law to give parental consent, may be allowed to do so.)
9. In compliance with judicial order or subpoena, provided the student is notified in advance of the compliance; or
10. Appropriate persons in connection with an emergency, if knowledge is necessary to protect the health or safety of a student, or other persons.

With the exception of Tennessee State University officials and staff who have been determined by the University to have legitimate educational interest, all individuals and agencies that 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.

## ACCESS DOES NOT INCLUDE

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

## DESTRUCTION OF RECORDS

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



**ADMISSIONS  
REGULATIONS  
POLICIES**

## ADMISSION TO GRADUATE STUDIES

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

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

### APPLICATION DEADLINES

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

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

Priority application deadlines for international applicants:

<b>Applicant Abroad</b>		<b>Applicant in U.S.</b>
Fall Semester	April 1	June 1
Spring Semester	Sept. 1	Oct. 1
Summer Semester	Feb. 1	March 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 be considered by the admission committees.

Criminal Justice:

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

Nursing:

Summer Admission	February 15
Spring Admission	October 15
Fall Admission	June 15

Speech Pathology:

Fall Admission Only	February 1
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Biological Sciences Doctoral Program:

Fall Admission only	March 15
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Occupational Therapy: February 15

Physical Therapy: October 1

Psychology

Doctoral Program:	
Fall Admission Only	December 1
Masters Psychology	
Fall Admission Only	February 1

Professional School Counseling (M.S.)

Fall Admission Only	February 1
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Late applicants are not guaranteed placement in specific classes (see section on "Non-degree Students").

### GENERAL REQUIREMENTS FOR ADMISSION TO GRADUATE STUDIES

1. An application for admission on the approved application form (online or paper) accompanied by a \$35.00 non-refundable application fee.
2. A baccalaureate degree from an accredited college or university which offers undergraduate programs which are prerequisites for the degree program at Tennessee State University.
3. Official transcripts from the registrar(s) of all colleges and universities attended (including Tennessee State University) sent to the School of Graduate Studies and Research. Official transcripts must be received before application for admission will be reviewed.

Note: Consult the Graduate School Web site ([www.tnstate.edu/graduate](http://www.tnstate.edu/graduate)) for any changes in admissions standards approved after the preparation of this Catalog.

### FALSIFYING ACADEMIC RECORDS

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

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

### PROOF OF IMMUNIZATION

The State of Tennessee requires students entering college to provide proof of two (2) doses of measles, mumps, and rubella (MMR) vaccine on or after the first birthday, or proof of immunity to measles if date of birth is 1957 or after. Students will not be allowed to register for classes until the appropriate form is filed in the health center. For additional information, contact: the Health Center at (615) 963-5291.

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

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

## **REQUIREMENTS FOR ADMISSION TO DOCTORAL PROGRAMS**

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

## **REQUIREMENTS FOR ADMISSION TO SPECIALIST IN EDUCATION PROGRAM**

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

## **REQUIREMENTS FOR UNCONDITIONAL ADMISSION TO MASTER'S DEGREE PROGRAMS**

Admission to a Master's Degree program requires:

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

## **CONDITIONAL ADMISSION TO MASTER'S DEGREE PROGRAMS**

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

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

1. Those that have a limited number of deficiencies in undergraduate course prerequisites. These deficiencies must be removed before enrollment in graduate courses of the same series.
2. 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 any standardized test required (as specified by degree program requirements) during the first semester of enrollment in courses for graduate credit.
3. Graduates of recognized four-year colleges not accredited when the bachelor's degree was awarded. Such applicants must:
  - a. present a record of superior scholarship on the undergraduate level
  - b. present unqualified recommendations from their undergraduate advisors; and,
  - c. submit an official report of performance on the GRE, MAT or the GMAT or other required test.
4. Students who present a grade point average below 2.5 must at the time of application submit standardized entrance exam 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 grade or quality point average is attained, the student is permitted to petition for a change of classification.

Note: The Master of Science in Nursing does not admit students with a GPA lower than 2.5

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:

1. to complete certification requirements, students should consult with the certification officer in the College of Education;
2. to earn thirty plus (30+) hours beyond the Master's degree;
3. to enrich their professional development;
4. to transfer credits earned to a degree program at another institution.

5. to take courses pending admission to a degree program (9 hour maximum)
6. to enroll in any of the seven graduate Certificate Programs currently offered by the University.

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

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



<b>Degree Program Admission Requirements</b>				
Refer to individual Programs in this catalog for more specific information				
<b>College/ Major</b>	<b>Degree Offered</b>	<b>Letters of Reference</b>	<b>Required Test</b>	<b>Other</b>
<b>COLLEGE OF AGRICULTURE, HUMAN, AND NATURAL SCIENCES</b>				
<b>Agricultural Sciences</b>	M.S.		GRE - (V, Q, & S) or MAT	
<b>Biology</b>	M.S.	2	GRE - (V&Q)	Personal Statement
<b>Biological Sciences</b>	Ph.D.	3	GRE - (V, Q &S)	Personal Statement
<b>Chemistry</b>	M.S.		*GRE - (V, Q, & S)	
<b>Professional Science Masters</b>	P.S.M.	2	GRE (V&Q)	Personal Statement
<b>COLLEGE OF BUSINESS</b>				
<b>Business Administration</b>	M.B.A.		GMAT	
<b>COLLEGE OF EDUCATION</b>				
<b>Educational Leadership</b>	M.Ed.	1	*GRE - (V, Q, & S) or MAT	Licensure: Teaching Certificate, Portfolio Items
	Ed.S.	1	GRE - (V & Q) or MAT	Licensure: Teaching Certificate, Portfolio Items
	Ed.D.	4	GRE - (V & Q) or MAT	Resume/CV - Writing Sample
<b>Curriculum &amp; Instruction</b>	M.Ed.		*GRE - (V, Q, & S) or MAT	
	Ed.D.	4	GRE - (V & Q) or MAT	Resume/CV - Writing Sample
<b>Advanced Studies in Teaching &amp; Learning</b>	M.Ed./RODP		*GRE - (V, Q, & S) or MAT	(Consult department)
<b>Elementary Education</b>	M.Ed.		*GRE - (V, Q, & S) or MAT	
<b>Special Education</b>	M.Ed.		*GRE - (V, Q, & S) or MAT	
<b>Psychology</b>	M.S.	3 (Counseling Psychology only)	*GRE - (V, Q, & S) or MAT	Personal Statement (Counseling Psychology only)
	Ph.D.	3	GRE - (V & Q) or MAT	Resume; Supplemental Application(Counseling Psychology only)
<b>Professional School Counseling</b>	M.S.	3	*GRE - (V, Q, & S) or MAT	Statement of Purpose
<b>COLLEGE OF ENGINEERING</b>				
<b>Engineering</b>	M.E.	2	FE (if GPA is less than 2.74 on 4.0 system)	
<b>Computer, Information, and Systems Engineering</b>	M.S.	2		
<b>Computer Science</b>	M.S.	2		

<b>Computer &amp; Information Systems Engineering</b>	Ph.D.	3	Letter of Intent	
<b>COLLEGE OF HEALTH SCIENCES</b>				
<b>Human Performance &amp; Sports Sciences</b>	M.A.Ed.		*GRE - (V, Q, & S) or MAT	
<b>Nursing</b>	M.S.N.	3		Personal Statement; Resume, Documentation of current professional nursing experience
	M.S.N./RODP	3		Personal Statement; Resume, Documentation of current professional nursing experience
<b>Occupational Therapy</b>	M.O.T.	3	GRE - (V&Q)	Personal Essay
<b>Physical Therapy</b>	D.P.T.	2	GRE - (V, Q)	Onsite Essay and Interview
<b>Public Health</b>	M.P.H.	3	GRE	Personal Statement
<b>Speech &amp; Hearing Science</b>	M.S.	3	GRE - (V & Q) or MAT	Statement of Intent
<b>COLLEGE OF LIBERAL ARTS</b>				
<b>Criminal Justice</b>	M.C.J.		*GRE - (V, Q) or MAT	
<b>COLLEGE OF PUBLIC SERVICE &amp; URBAN AFFAIRS</b>				
<b>Public Administration</b>	M.P.A.	3	GRE - (V&Q)	Statement of Purpose
	Ph.D.	3	GRE - (V&Q)	Statement of Purpose; Writing Sample
<b>Professional Studies</b>	M.P.S./RODP	3	GRE - (V, Q, & W)	Statement of Purpose
<b>Social Work</b>	M.S.W.	3	GRE	Essay Questions
* Total Minimum required score on "V & Q" is acceptable.				

## NON-DEGREE STUDENTS

The Dean of Graduate Studies and Research is the Advisor for non-degree students not pursuing certification or licensure. These students are those who have checked “NON-DEGREE” on the Application for Admission. They may also be classified as students earning thirty hours or more beyond the master’s, students qualifying for certification, students earning credit to transfer to another university (transient students), or students pending acceptance into a degree program.

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

## PROCEDURES FOR ADMISSION

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

1. Complete Online Graduate Admission Application Form or Copy of Graduate Admission 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. Pay \$35.00 application fee online or return the completed application form with the \$35.00 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:

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 University and United States admission standards.

## INTERNATIONAL APPLICANTS MUST SUBMIT

1. A completed application for Admission (online or paper application form) to Graduate School;
2. Certificates of proficiency in English or minimum score of 525 (Paper Test) or 71 (Internet-based Test) on the Test of English as a Foreign Language (TOEFL); or 6.0 on the International English Language Testing System (IELTS)
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 \$35.00 non-refundable application fee;
6. Applicable test scores, such as GMAT, GRE, FE, MAT, etc. as required by specific program;
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. Note: It is mandatory that all F-1 students have health insurance upon enrollment for the duration of their studies. The policy must include a clause of Medical Evacuation and Repatriation of \$10,000 each.
9. After admission, copies of Visa or Alien Registration card must be submitted before student may enroll.
10. Internationals transferring must submit to their current school the “Immigration Information” form for a release date, before processing of an I-20.

## TRANSIENT GRADUATE STUDENTS

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

1. Complete the “Permission for Enrollment as a Transient Student” form or present a letter from the institution that states the student has been granted permission to take courses for credit to be transferred to that institution;
2. Complete the application for admission form provided by the Graduate School;
3. Pay the \$35.00 non-refundable application fee.

## RESIDENCY CLASSIFICATION

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

The deadline dates are:

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

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

1. Dean of Admissions and Records
2. 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 College/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 academic 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/grade 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 descriptions 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 all 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 adjustment within ten working days, 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 final 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 if the dean is the instructor). In such cases the decision of the Vice President is final.

Grades, transcript information, drop/adds, withdrawals, and other data perceived by the student to be in error must be appealed 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 or graduate certificate completion. Departments may establish more restrictive retention requirements.

### **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 four courses from the Ph.D. core requirements within a two year period.

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

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

## **TIME LIMITATIONS FOR COMPLETING DEGREE REQUIREMENTS**

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

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

## **EXTENSION OF TIME LIMITATIONS**

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

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

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

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

Extensions will be granted with the following stipulations.

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

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

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

## **APPLICATION FOR GRADUATION**

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

## **HUMAN SUBJECTS**

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

## **ACADEMIC INTEGRITY STATEMENT**

Conferral of a graduate degree implies personal integrity and knowledge of, and adherence to, scholarly methods and ethical standards both within a discipline and the University as a whole. The graduate student is also expected to work in accordance with local, state, federal and international standards, regulations and laws, in all aspects of his or her program of study. There are three areas in which graduate students should be particularly cautious: (1) plagiarism, (2) the use of copyrighted material, and (3) adherence to research ethics.

Because the purpose of any university is the origination and honest dissemination of knowledge, any act that fails to forward those aims must be judged unethical. Violations of the University's standards of Academic Integrity will be investigated when suspected and sanctioned if established. Sanctions include dismissal from the University or revocation of degree(s).

Plagiarism is the presentation of another's works or ideas as one's own. This includes the undocumented word for word use and/or paraphrasing of another person's work, and/or the inappropriate undocumented use of another person's ideas. To avoid plagiarism, every direct quotation must be identified by quotation marks or by appropriate indentation and must be properly cited in the text or in a footnote.

Documentation is required when material from another source stored in print, electronic or other medium is copied, quoted, paraphrased or summarized in whole or in part in one's own words. Plagiarism may also arise from using one's own work (e.g., previously submitted for credit in another course) without proper documentation or consent of the instructor. In order to avoid questions of plagiarism, students involved in collaborative research should be careful to document the work of all collaborators. If in doubt, the student should consult with the course instructor, program advisor and/or the graduate school about the course work or project. The graduate student is obligated to ethical and responsible use of copyrighted material. This includes following the standards of academic Fair Use of copyrighted materials, established by U.S. and international law. In order to avoid questions of copyright violation, the student should consult with the course instructor, program advisor and/or Director of Libraries regarding any use of copyrighted material in presentations, classroom demonstrations, theses, dissertations, etc.

The graduate student must adhere to the ethical standards for research established within the discipline of his/her program of study and the University—as well as to all local, state, federal and international standards, regulations and law. Unethical acts in research include falsification or deliberate misrepresentation of data, mistreatment of human or animal subjects, failure to follow standards regarding use of hazardous materials, etc. The graduate student must adhere to research protocols established by the program and University to maintain proper institutional control of all research activities conducted by University administration, staff, faculty and students. Many forms of research conducted by the student, either independently or with a faculty member, will require oversight by the University's Institutional Review Board (IRB) process.

In particular, use of hazardous materials (with concerns for radioactivity or bio-safety) and human /animal subjects requires review and approval from authorities both within and outside the University before it proceeds. The student should consult and gain the necessary approvals with the program advisor and the appropriate research review committee in Division of Research and Sponsored Programs before engaging in any such research activity.

The University recognizes the right of a graduate student to appeal a sanction for failure to adhere to the University's standard for Academic Integrity. If the student believes that a sanction has been incorrectly applied, he/she may make an appeal to the Vice President for Academic Affairs. This appeal must be in writing, accompanied by any relevant supporting documents, and must be initiated within 30 calendar days of the beginning of the semester immediately following the semester in which the sanction was applied (Summer School excluded). The decision of Vice President for Academic Affairs is final.

## **PROGRAM OF STUDY DEGREES AND CERTIFICATES**

### **CERTIFICATE PROGRAMS**

A certificate program is a planned sequence of graduate-credit courses in a specialized area that does not lead to a degree itself. A graduate certificate is designed for post-baccalaureate, graduate, or post-graduate students. A certificate program may function independently of a degree program. Credits earned in a certificate program may be applied to a graduate degree in a related field. Certificates are currently offered through the Department of Public Administration, Department of Agricultural Sciences, and the Division of Nursing.

### **APPLICATION AND ADMISSION REQUIREMENTS**

Prospective students desiring to enroll for graduate certificate study must apply through the Office of the Dean of the School of Graduate Studies and Research. Applicants must possess a least a baccalaureate degree in the same or related field and meet the minimum admission criteria set by the Graduate School. Departments/Programs may establish higher admission standards. Students must be admitted unconditionally to a certificate program. A student in an existing master's or doctoral program may apply for admission to a certificate program.

## CREDIT-HOUR REQUIREMENTS

Credit-hour requirements for graduate certificates vary by program. The minimum credit-hour requirement for certificate programs is 15 semester graduate credit hours. Some certificate programs require more than 15 semester credit hours.

## RETENTION AND COMPLETION REQUIREMENTS

To maintain good standing, a student must maintain a cumulative grade point average (GPA) of 3.0 or better in all graduate work attempted. A minimum cumulative GPA of 3.0 is required for successful completion of a graduate certificate. Grades of D or F are not accepted for any certificate credit, but these grades will be computed in GPA. Students must submit and an approved program of study to the Graduate School during the first semester of enrollment in a certificate program.

## TIME LIMITS FOR CERTIFICATE COMPLETION REQUIREMENTS

All requirements for a certificate program must be completed within three calendar years, beginning with the first semester of enrollment in graduate credit.

## TRANSFER CREDIT-HOUR REQUIREMENTS

A certificate student may be allowed to transfer a maximum of 6 semester credit hours or 9 quarter hours from an accredited college or university. Courses taken for meeting the requirements for a degree program at Tennessee State University cannot be used for obtaining a certificate unless the student has applied for the certificate, been accepted, and submitted an approved program of study to the Graduate School.

## GRADUATION REQUIREMENTS

To be cleared for award of a Graduate Certificate, a student must meet the following requirements: (1) Applied and admitted to a certificate program; (2) Successfully completed all course requirements outlined on the approved program of study with a cumulative GPA of 3.00 or higher; and (3) Applied for graduation for the certificate (filed the TSU Application for Graduation) during the last semester of enrollment.

## 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.

## MASTER'S DEGREES

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 IN EDUCATION

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

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

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

### **MASTER OF BUSINESS ADMINISTRATION**

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

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

### **MASTER OF CRIMINAL JUSTICE**

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

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

### **MASTER OF EDUCATION**

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

The special requirements for the Master of Education degree include successfully completing a course in research methodology and a two-part comprehensive examination: one covering the field of professional education, the other the student's field of concentration. The comprehensive examination is taken in the last semester of enrollment. Students seeking administrative licensure must also pass the School Leaders Licensure Examination (SLLA).

### **MASTER OF ENGINEERING**

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

All students are required to take

1. at least six (6) credit hours of mathematics;
2. three (3) credit hours of laboratory based courses;
3. three (3) credit hours of special problems in Engineering application (design project);

4. fifteen (15) credit hours in the option, and
5. six (6) credit hours of electives with the consent of the advisor.

### **MASTER OF OCCUPATIONAL THERAPY**

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

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

### **MASTER OF PROFESSIONAL STUDIES**

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

### **MASTER OF PUBLIC ADMINISTRATION**

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

1. Completion of forty-two (42) semester hours with a minimum grade-point average of 3.0 including a supervised internship of at least 300 hours which was approved in advance by the graduate programs coordinator or department chair; or completion of thirty-six (36) semester hours with an internship exemption (evidence of relevant professional experience must be provided);
2. Completion of nine core courses (27 semester hours); and,
3. Successful completion of a written comprehensive examination, normally to be taken no earlier than the term in which the student's course work is completed.

### **MASTER OF PUBLIC HEALTH**

The Master of Public Health Program seeks to train professionals who will work to preserve and promote the health of local, state, national, and international populations through a focus on cultural competency.

A minimum of 30 semester hours of coursework must be completed in residency. Students may be allowed to take up to (9) credit hours without being fully admitted into the program. (Successful completion of the nine hours does not guarantee acceptance into the MPH program.)

## **MASTER OF SCIENCE**

The Master of Science degree program is available to all graduate students except those majoring in Teacher Education, 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 Professional School 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; Computer Science; Professional School Counseling; Psychology; Recreation; and Speech and Hearing Science.

### **MASTER OF SCIENCE IN COMPUTER, INFORMATION, AND 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. A Non-thesis option under the MS in CISE requires a total of 33 semester credit hour which includes 12 hours of electives. No comprehensive exams is required for the non-thesis option but a written report and oral presentation is required (in a required course). 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 COMPUTER SCIENCE**

The Master of Science in Computer Science provides recent college graduates, or college graduates who have had several years of professional life, an opportunity to enhance their careers and work on cutting-edge areas of computer science. The program offers two high-demand concentrations: (1) high-performance computing and bioinformatics, and (2) cyber-security and networking. Students can choose a non-thesis option (requires completion of 33 credit hours of coursework) or a thesis option (requires completion of 27 credit hours of course work and 6 credit hours of thesis).

### **MASTER OF SCIENCE IN NURSING**

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

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

### **MASTER OF SOCIAL WORK**

The Master of Social Work (MSW) is offered collaboratively by Austin Peay State University, Middle Tennessee State University, and Tennessee State University. Its mission is dedicated to the enhancement of human well-being, diversity, and social justice through developing and improving systems of public social services, especially for children and families, by offering graduate training in Social Work with a hybrid model of delivery.

The purpose of the Mid-Tennessee Collaborative Master of Social Work Program is to prepare students for Advanced Generalist Social Work Practice with systems of all types and sizes in both rural and urban areas, to prepare knowledgeable and competent professionals, and to provide leadership in the development of social delivery services, especially public social services.

The MSW requires completion of 60 credit hours.

### **PROFESSIONAL SCIENCE MASTER'S**

The Professional Science Master's (PSM) Degree Program with a concentration in Applied Geospatial Sciences (AGIS) is offered within the College of Agriculture, Human, and Natural Sciences (CAHNS) in collaboration with College of Business and College of Public Services and Urban Affairs. Courses are delivered online with an on-ground required internship. The PSM Degree Program is a non-thesis offering and requires completion of 36 semester credit hours. Students are trained in real-world situations through internships and theoretical principles through online courses. Students are acquired on-the-job experience with at least 300 internship hours under immediate supervision of an AGIS practitioner.

### **COMPREHENSIVE EXAMINATIONS FOR THE M.Ed., M.P.A., M.P.H. 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.P.A. degree are required to pass the comprehensive exam covering primary areas of the field as represented by the core courses.

Candidates for the M.A.Ed. and M.Ed., M.P.H., 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.P.H., M.A.Ed., M.S.  
NON-THESIS, and MSW**

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 Chair.

8. A second failure by a candidate will require further prescribed study before re—examination is permitted.
9. A third failure by any candidate shall result in the student's dismissal from Graduate School.
10. Candidates must present, upon arrival at the testing site, a Photo ID and a Letter of Approval (from the Graduate School) to take the Comprehensive Examination.

**THESES/DISSERTATIONS SUBMISSION POLICY**

The Graduate School began mandatory electronic theses and dissertations (ETD) submission policy with students graduating in fall 2007. All theses and dissertations must now be submitted electronically. Students are required to publish their ETDs through Proquest/UMI ETD Administrator. Additional requirements and procedures governing the submission of ETDs are available at the Graduate School Website ([www.tnstate.edu/graduate](http://www.tnstate.edu/graduate)).

**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 Instructional Leadership. Please see the Catalog section for the Department of Educational Leadership for specific details of admission and degree requirements. The degree requires a minimum of thirty (33) 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 Educational Leadership, and Curriculum and Instruction.

### DOCTOR OF PHILOSOPHY DEGREE (Ph.D.)

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

### DOCTOR OF PHYSICAL THERAPY (DPT)

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

1. Completion of 113 hours including:
  - a. Ninety Two semester hours (90) of academic instruction

- b. Twenty Three semester hours (23) of clinical education

2. Students are required to take a comprehensive examination during their final year in the program. The comprehensive exam covers materials from previous and current semesters. The comprehensive exam is given during the fall semester of the student's final year in the program, and is included in the calculation of the course grade for PHTH 7410 Clinical Integration Seminar. The comprehensive exam is worth 40% of the course grade.

## DISSERTATIONS

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

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



**COLLEGE OF  
AGRICULTURE,  
HUMAN AND  
NATURAL SCIENCES**

## COLLEGE OF AGRICULTURE, HUMAN AND NATURAL SCIENCES

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**(615) 963-7561**

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### DEPARTMENT OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

**Samuel Nahashon, Ph.D.,**

**Interim Department Chair**

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**MAJOR: AGRICULTURAL SCIENCES**  
**DEGREE: MASTER OF SCIENCE (M.S.)**  
**OPTIONS: Thesis, Non-Thesis**

#### CONCENTRATIONS:

**I. Agribusiness Management and Analysis**

**II. Food Supply Chain Management**

**III. Agricultural Education**

**IV. Animal Science**

**V. Plant Science**

#### OBJECTIVES

The master's program in Agricultural Sciences is designed to:

1. Prepare research scholars in the increasingly complex scientific field of agriculture and related areas;
2. Prepare scholars for rewarding careers in government, the agricultural industry, and higher education;
3. Prepare scholars for leadership roles in professional agriculture;
4. Prepare professionals with a set of critical and analytical business skills to fulfill the unique demands of the food and agribusiness industry;
5. Prepare scholars for further training in doctoral programs; and
6. Provide advanced training in agricultural education for graduates working in secondary schools and vocational agriculture; and
7. Provide advanced training in the application of Geospatial Information Systems and Global Positioning Systems

#### OVERVIEW

The Master of Science in Agricultural Sciences is offered with five concentrations: Agribusiness Management and Analysis, Food Supply Chain Management, Agricultural Education, Animal Science, and Plant Science. The degree is offered with two options, thesis or non-thesis.

The thesis option in Agribusiness Management and Analysis, and Food Supply Chain Management concentrations requires a minimum of twenty-nine (29) credit hours of course work and a thesis of four (4) credit hours. The candidate for the degree in these two concentrations must complete twelve (12) credit hours of core courses: AGSC 5060, AGSC 5110, AGSC 5120, AGSC 5610-5620; twelve (12) credit hours minimum of required courses in the selected concentration; and nine (9) hours maximum of electives. The thesis option in Agricultural Education, Animal Science, and Plant science concentrations requires a minimum of twenty-six (26) credit hours of course work and a thesis of four (4) credit hours. The candidate for the degree in these three concentrations must complete twelve (12) credit hours of core courses: AGSC 5060, AGSC 5110, AGSC 5120, AGSC 5610-5620; twelve (12) credit hours minimum of required courses in the selected concentration; and six (6) hours maximum of electives. The non-thesis option in all the five concentrations requires a minimum of thirty-five (35) credit hours of course work. The candidate for the degree must complete eleven (11) credit hours of core courses: AGSC 5060, AGSC 5110, AGSC 5350, AGSC 5610-5620; fifteen (15) credit hours minimum of required courses in the selected concentration; and nine (9) hours maximum of electives. These courses must be approved by the advisor and department head.

The College of Agriculture, Human and Natural Sciences at Tennessee State University is partnering with Peace Corps Master's International program to offer students the opportunity to earn credits toward a Master's of Science degree in Agricultural Sciences while serving as Peace Corps Volunteers. This partnership is a part of the Peace Corps Master's International program, which allows volunteers to combine Peace Corps service with a master's degree program and receive credit for Peace Corps service abroad.

Under this program, students may earn up to six graduate credit hours for Peace Corps service to fulfill up to six hours of requirements for the MS degree in Agricultural Sciences. Participants must apply to Peace Corps and Tennessee State University separately. Please contact the Department of Agricultural and Environmental Sciences for details and requirements for the degree program. Further information on Master's International program is available at [www.peacecorps.gov/masters](http://www.peacecorps.gov/masters).

#### Admission Requirements: M.S. Program

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 294 on the GRE or 383 on the MAT or 2.00-2.24 GPA and a minimum pre-admission test score of 297 on the GRE or 394 on the MAT. Candidates having a Master's degree from an accredited institution may be exempted from GRE Score requirements.

## 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 Option

Each student must pass Research Methods (AGSC 5110), must have a thesis guidance committee appointed, and must be advanced to candidacy before enrolling in Thesis Writing (AGSC 5120).

The candidate must submit a thesis on a topic approved by the major advisor. Upon completion of the thesis, the candidate must satisfactorily pass an oral examination conducted by the Thesis Examination Committee. Students choosing this option in Agribusiness Management and Analysis, and Food Supply Chain Management concentrations will require 33 hours of coursework which will include four (4) credit hours of thesis research. But students choosing the Agricultural Education, Animal Science, and Plant science concentrations will require 30 hours of course work which will include four (4) credit hours of thesis research.

#### Non-Thesis Option

The option is for students who would like to focus on training in specialized areas to meet the needs of employers in agricultural product processing, marketing organizations, input supply firms, teaching, agricultural extension services, and various state and federal government agencies. This program is not recommended for students who have any aspirations toward pursuing a Ph.D. degree. Students choosing the non-thesis option will be required to take a minimum of 35 hours of course work which will include AGSC 5350 Independent Study of Contemporary Issues and Problems. The graduate student, with guidance from their major advisor will identify a need area in agriculture, research the area and write a paper.

#### Comprehensive Examination

Upon completion of AGSC 5350 and during the semester of graduation, students choosing the non-thesis option must take a comprehensive written and oral examination administered by the student's advisory committee and other faculty members representing appropriate subject matter areas. The student's major advisor will serve as chairperson of the committee conducting the examination. If a student fails the comprehensive examination, one retake will be allowed. Should the student again fail, a third and final examination may be taken upon completion of additional course work (minimum of 6 hrs) to be selected by the student's advisory committee.

## PROGRAMS OF STUDY

### Core Courses, All Concentrations - Thesis 12 hours, or Non-Thesis 11 hrs.

AGSC 5060	Statistics for Res. Workers	3
AGSC 5110	Research Methods	3
AGSC 5120	Thesis Writing	4
or AGSC 5350	Independent Study	3
AGSC 5610-5620	Seminar	1, 1

### CONCENTRATION I: AGRIBUSINESS MANAGEMENT AND ANALYSIS 12 HRS. MINIMUM, THESIS OR 15 HRS. MINIMUM NON-THESIS

AGSC5080	Agribusiness Management and Market Analysis	3
AGSC5090	Food and Fiber Industry Economics and Policy	3
AGSC5100	Environmental, Resource Economics and Management	3
AGSC 5300	Decision-Making in Agribusiness Quantitative Appl.	3
AGSC 5310	International Agricultural Trade and Marketing	3
AGSC 5330	Agribusiness Strategy	3
AGSC 5014	Food Marketing and Retail management	3

### Electives - 9hrs. Maximum each for Thesis or Non-Thesis option with the approval of the advisor and department head.

ECON 6110	Managerial Economics	3
MGMT 6020	Behavior in Organizations	3
BISI 6131	Management and Evaluation of Information Systems	3
ACCT 5000	Foundations in Accounting	3
AGSC 5040	Program Planning and Evaluation in Ag. & Ext. Ed.	3
AGSC 5050	Curriculum for Ag. STEM Ed.	3

### CONCENTRATION II: FOOD SUPPLY CHAIN MANAGEMENT 12 HRS. MINIMUM, THESIS OR 15 HRS. MINIMUM NON-THESIS

AGSC 5080	Agribusiness Management and Market Analysis	3
AGSC 5300	Decision Making in Agriculture – Quantitative Applications	3
AGSC 5310	International Agricultural Trade and Marketing	3
AGSC 5012	Food Supply and value Chain Management	3
AGSC 5090	Food Industry Economics, Regulations and Policy	3
AGSC 5100	Environmental Resource Economics and Management	3
MGMT 6100	Logistics	3

### Electives - 9 hrs. maximum each for Thesis or Non-Thesis option with the approval of the advisor and department head.

ECON 6110	Managerial Economics	3
MGMT 6020	Behavior in Organizations	3
BISI 6131	Management and Evaluation of Information systems	3
ACCT 5000	Foundations in Accounting	3
AGSC 5040	Program Planning and Evaluation in Ag. & Ext.Ed.	3
MGMT 6220	Procurement Management	3
AGSC 5330	Agribusiness Strategy	3

### CONCENTRATION III: AGRICULTURAL EDUCATION - 12 HRS. MINIMUM, THESIS OR 15 HRS. MINIMUM NON-THESIS

AGSC 5010	Foundation of Agricultural & Extension Education	3
AGSC 5020	Curriculum Development for Formal & Non-Formal Agricultural & Extension Education	3

AGSC 5030	Instructional Design in Agricultural & Extension Education	3
AGSC 5040	Program Planning and Evaluation in Ag. & Ext. Ed.	3
AGSC 5050	Curriculum for Agriculture STEM Ed.	3

**Electives - 6 hrs. maximum, Thesis or 9 hrs. maximum, Non-Thesis with the approval of the advisor and department head.**

AGSC 5080	Agribusiness Management and Market Analysis	3
AGSC 5090	Food and Fiber Industry	3
AGSC 5100	Environmental Resource Economics	3
AGSC 5140	Special Problems in Animal and Poultry Science	3
AGSC 5150	Livestock Management	3
AGSC 5220	Plant Growth Substances	3
AGSC 5260	Soil and Plant Analysis	3
EDCI 5260	Philosophy of Education	3
EDCI 5270	Advanced Social Studies	3
PSYC 5430	Advanced Educational Psychology	3

**CONCENTRATION IV: ANIMAL SCIENCE - 12 HRS. MINIMUM, THESIS OR 15 HRS. MINIMUM NON-THESIS**

AGSC 5130	Animal Nutrition	3
AGSC 5140	Special Problems in Animal and Poultry Science	3
AGSC 5150	Livestock Management	3
AGSC 5160	Animal Genetics and Breeding	3
AGSC 5170	Advanced Poultry Production and Management	3

**Electives - 6 hrs. maximum, Thesis or 9 hrs. maximum, Non-Thesis with the approval of the advisor and department head.**

AGSC 5090	Food and Fiber Industry	3
BIOL 5180	Cell Biology	3
AGSC 5280	Advanced Poultry Nutrition and Biotechnology	3
CHEM 5410	Advanced Biochemistry I	3
CHEM 5420	Advanced Biochemistry II	3

**CONCENTRATION V: PLANT SCIENCE - 12 HRS. MINIMUM, THESIS OR 15 HRS. MINIMUM NON-THESIS**

AGSC 5180	Soil Classification	3
AGSC 5190	Plant Breeding	3
AGSC 5220	Plant Growth Substances	3
AGSC 5230	Advanced Propagation of Horticultural Plants	3
AGSC 5240	Advanced Pomology	3
AGSC 5260	Soil and Plant Analysis	3

**Electives - 6 hrs. maximum, Thesis or 9 hrs. maximum, Non-Thesis with the approval of the advisor and department head.**

AGSC 5090	Food and Fiber Industry	3
AGSC 5100	Environmental Resource Economics	3
BIOL 5180	Cell Biology	3
CHEM 5410	Advanced Biochemistry I	3
CHEM 5420	Advanced Biochemistry II	3

## MAJOR: APPLIED GEOSPATIAL INFORMATION SYSTEMS

### DEGREE: PROFESSIONAL SCIENCE MASTER'S OVERVIEW

The Professional Science Master's (PSM) Degree Program with a concentration in Applied Geospatial Information Sciences (GIS) is newly established program to expand our existing online Graduate Certificate Program in Applied Geospatial Information Systems (GIS). The program offers students with opportunities to study a PSM Degree with a concentration in Applied GIS. Courses in this program are delivered online with an on-ground required internship. The program is designed for individuals who wish to pursue careers in professional settings other than research or academia, and who do not wish to pursue additional educational opportunities at the doctoral level. The PSM Degree Program with a concentration in Applied GIS is a non-thesis offering and requires completion of 36 semester credit hours. Students will be trained in real-world situations through internships and theoretical principles through online courses. Students will acquire on-the-job experience with at least 300 internship hours under immediate supervision of an Applied GIS practitioner.

The Graduate Certificate in Applied Geospatial Information Systems (GIS) is an online stand-alone credential designed for degree-holding individuals who wish to develop their knowledge and skills in GIS for enhancement of their professional careers. The program will prepare individuals to meet the rapidly increasing need for graduates highly qualified in the application and use of GIS. Certificate courses are designed and taught with a practical and applied orientation. The Certificate program requires the completion of six courses (18 semester credit hours) in GIS and Global Positioning Systems (GPS), and can be completed by a part-time student within twelve months.

The Ph.D. in Biological Sciences is an interdepartmental degree program offered by the Department of Biological Sciences and the Department of Agricultural and Environmental Sciences in the College of Agriculture, Human and Natural 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 department.

### Admission Requirements: PSM Program

Applicants must fulfill the following requirements for admission into the PSM Degree Program in Applied GIS:

- A baccalaureate degree from an accredited institution in a STEM or STEM-related field with transcripts from all institutions attended; with a grade point average of 2.75 on a 4.00 point scale;
- A minimum score of 3 or higher on the Graduate Record Examination (GRE) analytical writing and a score of 290 or higher on the GRE (verbal and quantitative) or rank 30th percentile or higher on the GRE (verbal and quantitative);
- A one-page statement describing personal interests, career goals, and previous academic preparation (such as math, statistics, and/or critical thinking) that will help in evaluating the candidate's overall fit within the program;
- Two letters of recommendations from professional or academic contacts conveying the applicant's ability for success in the program; and

- Test of English as a Foreign Language (TOEFL)—for international applicants from non-English speaking countries.

**PSMA 6585** Internship in Applied Geospatial Sciences 3  
 \* Only eligible for students within driving commuting distance of TSU.

**Program of Study: PSM Program**

The PSM Degree Program with concentration in Applied GIS is an online offering with an on-ground required internship. The program consists a total of 36 semester credit hours. Should a student from the Graduate Certificate Program in Applied GIS satisfy the above admission requirement to the PSM Degree Program with a concentration in Applied GIS, all the 18 credit hours of her/his courses in the certificate program will be transferrable towards his/her PSM program of study. Similarly, a student who has been admitted to the PSM Degree Program with a concentration in Applied GIS can request a Graduate Certificate in Applied GIS after completing the required 18 credit hours.

**CERTIFICATE: APPLIED GEOSPATIAL INFORMATION SYSTEMS**

**Admission Process**

Applicants for the Certificate must hold a baccalaureate degree from an accredited institution of higher education and must meet the Graduate School requirements for non-degree admission and retention as published in the University catalog. Requests for application forms and materials should be directed to the School of Graduate Studies and Research.

**Certificate Requirements**

To earn the Graduate Certificate in Applied Geospatial Information Systems, students must satisfactorily complete the following courses:

- PSMA 6510 Advanced Geospatial Information Systems
- PSMA 6520 Advanced Spatial Analysis
- PSMA 6530 Advanced Geospatial Metadata
- PSMA 6540 Advanced Spatial Database Design and Management
- PSMA 6550 Advanced Geospatial Information Systems Application and Design
- PSMA 6560 Advanced Global Positioning Systems

The Certificate is awarded upon the successful completion of the six courses (18 semester credit hours).

**MAJOR: BIOLOGICAL SCIENCES**  
**DEGREE: DOCTOR OF PHILOSOPHY (Ph.D.)**

**Admission Requirements: Ph.D. Program**

See admission requirements under Ph.D. Program - Department of Biological Sciences

**Program of Study**

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**

The student must apply for admission to candidacy after completing the 24-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**

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.

**Degree Requirements: PMS Program**

A total of 36 semester credit hours are required for completion of the PSM degree Program. Other requirements for its completion are similar to those of a traditional Master’s of Science degree, with two major distinctions: 1) students will complete at least 300 internship hours instead of a thesis; and 2) students will complete a set of multidisciplinary courses of study expanded to include graduate business, economics, management, and public service. A full-time student should be able to complete the degree requirements in two years. Part-time students taking two courses (6 credit hours) per semester and four courses (12 credit hours) per academic year should be able to complete the degree requirements in three years. A cumulative grade point average of “B” (3.00 quality points) in all graduate courses taken at TSU is required for graduation. Guidelines on probation, suspension, and readmission into the program after suspension are the same as those published in this Graduate Catalog for other graduate programs.

**PROGRAMS OF STUDY**

**1. Major Field Core: Total credits: 15**

<b>BISI 6550</b>	Project Management	3
<b>MGMT 5000</b>	Survey of Management and Marketing	3
<b>Or</b>	or	
<b>AGSC 5080</b>	Agribusiness Management and Market Analysis	
<b>PRST 5040</b>	Human Resources Management	3
<b>PRST 5100</b>	Issues and Ethics	3
<b>PRST 5310</b>	Leadership in Organization	3

**2. Concentrations Total Credits 21**

<b>PSMA 6510</b>	<b>Geospatial Information Systems</b>	
<b>PSMA 6520</b>	Advanced Spatial Analysis	3
<b>PSMA 6525</b>	Remote Sensing and Image Analysis	3
<b>Or</b>	or	
<b>PSMA 6560</b>	Global Positioning Systems*	
<b>PSMA 6530</b>	Advanced Geospatial Metadata	3
<b>PSMA 6540</b>	Advanced Spatial Database Design and Management	3
<b>PSMA 6550</b>	Advanced Geospatial Information Systems Application and Design	3

After gaining admission to candidacy the student must complete an approved curriculum (24 hours minimum of electives set by the student's research advisory committee), enroll in Graduate Seminar (BIO 5010, 5020) or the Seminar in Biology every semester (BIO 7010, 7020), complete a dissertation (24 hours), and successfully defend the dissertation prior to gaining the Ph.D. degree.

### Required Courses: 24 Hours

#### To be completed prior to Admission to Candidacy

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

#### After Admission to Candidacy: 52 Hours

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

#### Graduate Elective Courses

AGSC 5160	Animal Genetics and Breeding	3
AGSC 5280	Advanced Poultry Nutrition and Biotechnology	3
AGSC 5190	Plant Breeding	3
AGSC 7010	Advancements In Agricultural Biotechnology	3
AGSC 7020	Economic, Regulatory and Ethical Issues in Biotechnology	3
AGSC 7030	Gene Expression and Regulation In Higher Plants	3
AGSC 7040	Plant Tissue Culture Methods and Applications	3
AGSC 7050	Biotechnology in Animal Reproduction	3
AGSC 7060	Advanced Soil Technology	3
AGSC 7070	Molecular Genetics Ecology	3

#### COURSE DESCRIPTION

**AGSC 5010. FOUNDATION OF AGRICULTURAL AND EXTENSION 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 5012 FOOD SUPPLY AND VALUE CHAIN MANAGEMENT. (3)** The course provides a graduate-level premise to food production, systems approaches and supply chain management strategies and applications. It focuses on methods involved in food products supply chain systems from farm to fork; environmentally, technologically, economically and socially. The course emphasizes on integrated animal and crop-based food supply system(s) of the United States and internationally.

**AGSC 5014 FOOD MARKETING AND RETAIL MANAGEMENT. (3)** This course introduces students to the principles and methods of agribusiness marketing: marketing process, strategic planning, market research, consumer behavior, segmentation or targeting or positioning, product or service design and branding, pricing decisions and strategies, retailing and value-delivery channels, promotions/advertising, and holistic and sustainable marketing. The course takes an analytical and practical approach: providing analytical methods, real-life examples and case studies, and engaging students in applications and analyses.

**AGSC 5020. CURRICULUM DEVELOPMENT FOR FORMAL AGRICULTURAL AND EXTENSION EDUCATION. (3)** Study of procedures and practices for determining manpower needs; analysis of occupational clusters; study of identification and development of manpower sources.

**AGSC 5030. INSTRUCTIONAL DESIGN IN AGRICULTURAL AND EXTENSION EDUCATION. (3)** Study of the organization of vocational and occupational programs; study of principles and concepts of program management; study of the techniques and procedures for program development.

**AGSC 5040. PROGRAM PLANNING AND EVALUATION IN VOCATIONAL EDUCATION. (3)** Concepts and principles of planning vocational and technical programs at the local, regional, and state level; utilization of advisory councils and citizen committees; study of the administrative structure and legislative mandates, principles and techniques of program evaluation.

**AGSC 5050. SPECIAL PROBLEMS IN VOCATIONAL EDUCATION. (3)** Students will be allowed to select a problem of interest, conduct an exhaustive literature search and present findings in written form. Discussion of progress will prevail during class periods.

**AGSC 5060. STATISTICS FOR RESEARCH WORKERS. (3)** Training and skills in research design, analyzing data, presentation of data, and drawing conclusions, with special emphasis on descriptive inferences.

**AGSC 5080. AGRIBUSINESS MANAGEMENT AND MARKET ANALYSIS. (3)** Introduction to and growth of the U.S. agribusiness industry, its scope and composition. Evolution and composition of basic managerial principles, organization, operation, and administration of agribusiness firms especially under situation of risk and uncertainty. Managerial Methodology Application of economic theory and Statistical methods, the analysis of prices, and marketing of agribusiness products.

**AGSC 5090. FOOD AND FIBER INDUSTRY: ECONOMICS & POLICY. (3)** The economics of production, competition, markets, and policy for the food and fiber sector of the economy. While the course stresses functional relationships and theoretical principles, descriptive material is included to enhance one's understanding of current problems and the interrelationships between agricultural and general economy, identification of relevant issues, review of criteria for evaluating program development of policies.

**AGSC 5100. ENVIRONMENTAL, RESOURCE ECONOMICS AND MANAGEMENT. (3)** The course analyzes major environmental and resource issues in relation to operations of agribusinesses using economic principles and alternative management scenarios. Market and non-market approaches to valuation of environmental and natural resources will be discussed in conjunction with the regulatory framework and management institutions.

**AGSC 5110. RESEARCH METHODS. (3)** The objectives of this course are: (1) to develop an understanding of research philosophies, methods, and procedures; (2) to gain experience in developing and designing research projects, organizing and analyzing research data.

**AGSC 5120. THESIS WRITING. (4)** This course is designed to provide instruction that will enable the student to adequately prepare a thesis from his or her on-going thesis research under the direction of the major advisor and guidance committee. The format of the thesis must conform to that of the subject matter area and the requirements of the Graduate School.

**AGSC 5130. ANIMAL NUTRITION. (3)** Devoted to the study of nutrients and their metabolism; studies of recent developments in animal nutrition, experimental procedures and application in commercial feeding.

**AGSC 5140. SPECIAL PROBLEMS IN ANIMAL AND POULTRY SCIENCE. (3)** Students will be allowed to select a problem of interest, conduct an exhaustive literature search and present findings in written form. Discussions on progress will prevail during class periods.

**AGSC 5150. LIVESTOCK MANAGEMENT. (3)** Provides an opportunity for the student to receive advanced training in the care and management of purebred herds, commercial herds, and herd development.

**AGSC 5160. ANIMAL GENETICS AND BREEDING. (3)** A study of the principles of genetics with emphasis on breed improvement involving change of gene frequency, role of selection, selection table of contents, importance of pedigree and methods of estimating heritability.

**AGSC 5170. ADVANCED POULTRY PRODUCTION AND MANAGEMENT. (3)** Devoted to studying the principles and current practices in production, management and marketing of eggs, broilers, and turkeys; recognition of field problems, and how to solve such problems economically.

**AGSC 5180. SOIL CLASSIFICATION. (3)** A study of the basis of soil classification, genesis and morphology of zonal soils of the United States. Emphasis placed on the important series of Tennessee. Prerequisites: AGSC 2200, 4230. Two lectures and one laboratory.

**AGSC 5190. PLANT BREEDING. (3)** A study of the methods, principles and results of plant improvement work, hereditary variation and the general principles of plant breeding. Prerequisite: AGSC 1200.

**AGSC 5220. PLANT GROWTH SUBSTANCES. (3)** A general study of the organic substances which affect plant growth and development. Special emphasis will be placed on the auxins and cytokinins.

**AGSC 5230. ADVANCED PROPAGATION OF HORTICULTURAL PLANTS. (3)** A study of the methods of propagating horticultural plants, including seedage, cuttage, and grafting of both economic and ornamental plants. Two lectures and one laboratory period.

**AGSC 5240. ADVANCED POMOLOGY. (3)** A study of the development and performance of fruit plants as influenced by inheritance and environment. Two field trips required. Two lectures and one laboratory period.

**AGSC 5260. SOIL AND PLANT ANALYSIS. (3)** Fundamental principles involved in analyzing soils and plants. Current techniques and methods of interpretation of soil testing and plant analysis.

**AGSC 5280 ADVANCED POULTRY NUTRITION AND BIOTECHNOLOGY (3).** This course will provide students with an opportunity to develop knowledge of principles of Poultry Nutrition and feeding. Topics include nutrient requirements of poultry, metabolic processes and the role of nutrients on performance, health and nutritional deficiency diseases of poultry, feed and drug regulations, common feed ingredients, additives, and supplements used in the poultry industry. The course will also address the application of biotechnology in poultry feeds and feeding, common feed ingredients used in poultry feeding and least cost feed formulation. The course will also emphasize practical feeding of poultry with emphasis on specific nutrient requirements. Prerequisites: AGSC 1410

**AGSC 5300. DECISION-MAKING IN AGRIBUSINESS: QUANTITATIVE APPLICATIONS. (3)** This course develops expertise in quantitative problem-solving techniques necessary for decision-making in agribusiness with extensive use of computers. Introduction to the concepts and methods of applying econometric analyses to problems of economic research. Emphasis will be placed on the formulation and solution of business problems using selected quantitative tools such as linear programming, simulation, game theory, and inventory models.

**AGSC 5310. INTERNATIONAL AGRICULTURAL TRADE AND MARKETING. (3)** The course emphasizes economic development, trade theory, and its application to agricultural trade. Review of the fundamental trade theory, changing structure of international trade markets, U.S. trade policies for agriculture, and the role of international commodity trading agreement.

**AGSC 5330. AGRIBUSINESS STRATEGY. (3)** The course is designed to enhance learning through presentations of case studies and analyses of relevant issues by students and guest speakers from agribusinesses. Topics to be covered include but are not limited to location of business, supply of inputs, and international marketing tools.

**AGSC 5350. INDEPENDENT STUDY-CONTEMPORARY ISSUES AND PROBLEMS. (3)** A required course for students choosing the non-thesis option for a Master of Science Degree in Agricultural Sciences. Individual Study and Research under faculty guidance, resulting in a substantial piece of writing. The intent of this course is to broaden students understanding of theory and methods and apply them to analyze selected issues and problems in a broader context in various areas of agriculture. The students will apply (synthesize) knowledge gained in various courses in presenting issues and problems and integrating the materials learned so as to apply them in his/her area of interest or problem at hand. The course will reflect students' ability to analyze, explore, and synthesize knowledge and skill as well as communication skills.

**AGSC 5610-5620. GRADUATE SEMINAR IN AGRICULTURAL SCIENCES. (1-1)** Critical review of current literature in Agricultural Sciences. Required of all M.S. graduate students.

**PSMA 6510 GEOSPATIAL INFORMATION SYSTEMS (3).** An introduction to geospatial information systems (GIS) principles and technologies. Upon successful completion of this course, students will have the knowledge and skillset to demonstrate how to use GIS to predict and solve real-world problems related to spatial data. Students will be able to: differentiate between GIS terminology and concepts; evaluate spatial data through its structure and organization; comprehend the representation of spatial data; develop a foundation for creating, editing, querying and presenting geospatial data; and evaluate laboratory exercises using a hands-on to learn GIS software and hardware. 3 credit hours.

**AGSC 6520 ADVANCED SPATIAL ANALYSIS (3).** Evaluates the concepts and analytical procedures used to extract and simplify complex systems using geospatial information systems (GIS). This course analyzes geometric, coincidence, and adjacency models as applied to surface analysis, linear analysis, raster analysis, topological overlay, and contiguity analysis. Spatial modeling will be used to analyze, simulate, predict, and resolve real-world problems and issues. Upon successful completion of Advanced Spatial Analysis, students will have the knowledge and skills to develop and differentiate between advanced spatial statistical models needed to predict and solve real-world problems correlated to geospatial data. Students should be able to: apply the terminology and concepts of spatial analysis and modeling; apply specific forms of three-dimensional spatial data and their structure, organization, and analysis; differentiate between methodologies used in spatial analysis; interpret the representation of three-dimensional spatial data through spatial statistics; and apply concepts of planning used in the spatial analysis decision-making processes Systems. **Prerequisites or co-requisites: PSMA 6510.**

**PSMA 6525 REMOTE SENSING AND IMAGE ANALYSIS (3).** This course evaluates the concepts and analytical procedures used to extract and simplify complex systems using geospatial information systems (GIS). This course analyzes geometric, coincidence, and adjacency models as applied to surface analysis, linear analysis, raster analysis, topological overlay, and contiguity analysis. Spatial modeling will be used to analyze, simulate, predict, and resolve real-world problems and issues. Upon successful completion of Advanced Spatial Analysis, students will have the knowledge and skills to develop and differentiate between advanced spatial statistical models needed to predict and solve real-world problems correlated to geospatial data. Students should be able to: apply the terminology and concepts of spatial analysis and modeling; apply specific forms of three-dimensional spatial data and their structure, organization, and analysis; differentiate between methodologies used in spatial analysis; interpret the representation of three-dimensional spatial data through spatial statistics; and apply concepts of planning used in the spatial analysis decision-making processes

**PSMA 6530 ADVANCED GEOSPATIAL METADATA (3).** An examination of geospatial data that make up the most expensive component of a geospatial information system (GIS) and accounts for billions of dollars of expenditures annually. Upon successful completion of Advanced Geospatial Metadata, students will demonstrate knowledge about metadata through the evaluation of background data correlated to the various types of GIS data. Students should be able to: differentiate between critical information attached to metadata; differentiate between different procedures used to create and maintain metadata; evaluate metadata and its components; and demonstrate to GIS users the how and why there are needs for documenting their data.. **Prerequisite or corequisites: PSMA 6510.**

**PSMA 6540 ADVANCED SPATIAL DATABASE DESIGN AND MANAGEMENT (3).** An examination and demonstration of the accuracy and usability of data that determines the analysis, output, and cost of any geospatial information system (GIS) using techniques that include python programming. Upon successful completion of Advanced Spatial Database Design and Management, students should be able to evaluate and differentiate between geodatabase and database design; editing; and management within a GIS. **Prerequisite or corequisites: PSMA 6510; PSMA 6520.**

**PSMA 6550 ADVANCED GEOSPATIAL INFORMATION SYSTEMS APPLICATION AND DESIGN (3).** Concepts and procedures used to successfully assess needs, evaluate requirements, design, and implement geospatial information systems (GIS). Upon successful completion of Advanced Geospatial Information Systems Application and Design, students will be able to develop, evaluate, and differentiate between data and technology needed to produce desired information products. Students should also be able to: demonstrate cost benefit analysis and project proposal development. **Prerequisites or co-requisites: PSMA 6510, PSMA 6520.**

**PSMA 6560 ADVANCED GLOBAL POSITIONING SYSTEMS (3).** Principles, technology, and use of Global Positioning Systems (GPS). Upon successful completion of GPS, students will have the knowledge and skills to evaluate and differentiate between the principles of navigation and positioning. Students should be able to: evaluate and differentiate between GPS instrumentation; evaluate and differentiate between the collection and processing of data; and evaluate and differentiate between the integration of GPS with geospatial information systems (GIS). \*Please note that this course is only eligible for students within driving commuting distance of TSU. **Prerequisites: None.**

**PSMA 6585: INTERNSHIP IN APPLIED GEOSPATIAL SCIENCES (3).** This is not an online course and has an on-ground requirement lasting 13 weeks over the summer term. It provides on-the-job experience enabling students to perform adequately in a professional business setting and requires at least 300 hours of participation in an assigned and approved professional setting under a practitioner's guidance with at least one standardized national AGS certification. Students must complete PSMA 6510 and PSMA 6525 or PSMA 6560 before they enroll in internship course. Students can take other courses concurrently **Prerequisites: PSMA 6510 and PSMA 6525 or PSMA 6560.**

**AGSC 7010. ADVANCEMENT IN AGRICULTURAL BIOTECHNOLOGY (3).** A review of recent advances in biotechnology in agriculture with emphasis on experimental techniques and application in improvement of livestock and crop production. **Prerequisite: Animal and Plant Genetics (AGSC 3400).**

**AGSC 7020. ECONOMIC, REGULATORY AND ETHICAL ISSUES IN BIOTECHNOLOGY. (3).** This course will analyze factors affecting the development of biotechnology using economic principles and discuss regulatory and ethical issues as they relate to plant and animal products and by-products. **Prerequisites: At least 6 credits in economics courses, of which 3 credits should be in intermediate level economic theory.**

**AGSC 7030. GENE EXPRESSION AND REGULATION IN HIGHER PLANTS. (3).** A study of gene structure in higher plants, and gene expression and its regulation in plant growth development, morphogenesis, reproduction, response to environmental stress and defense mechanism. Special topics such as transposable elements, Arabidopsis, molecular plant breeding will be included. **Prerequisites: AGSC 5190 or BIO 5110.**

**AGSC 7040. PLANT TISSUE CULTURE METHODS AND APPLICATIONS. (3).** Emphasis on hands-on laboratory procedures. Application of tissue culture techniques for the improvement of economic plants will be emphasized. **Prerequisite: An introductory course in botany and plant physiology.**

**AGSC 7050. BIOTECHNOLOGY IN ANIMAL REPRODUCTION. (3).** Discussion on the various advances in techniques used to enhance animal reproduction and livestock productivity. Basic concepts of mammalian reproductive function will be studied. However, students should have a working knowledge of reproductive physiology. Methods such as artificial insemination, embryo transfer, in vitro fertilization, and embryo manipulation will be covered. Topics will be viewed from basic and applied perspectives. A comprehensive review of current literature will be included as a part of all discussions. Laboratory time in connection with this course will provide hands-on experience with some practices associated with reproductive biology. **Prerequisite: Previous course in Reproductive.**

**AGSC 7060. SOIL TECHNOLOGY. (3).** Evaluation of soil utilizing most recent advances in physical-chemical properties, soil structure, metric potential, water management/conservation techniques, and irrigation systems and pollution abatement. **Prerequisites: AGSC 2200, 4230; Basic Chemistry and Calculus.**

**AGSC 7070. MOLECULAR GENETIC ECOLOGY. (3).** This course will explore and explain the underlying sources of genetic variation in populations, how this variation can be detected and analyzed, and how to interpret observed variation. Also covered will be examples of the applications of molecular genetics in behavioral ecology and population genetics drawn from current literature. Emphasis will be placed on applying these principles in agricultural research. **Prerequisites: Undergraduate or Graduate Genetics.**

## AGRICULTURAL SCIENCES FACULTY

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**DEPARTMENT OF  
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**MAJOR: BIOLOGY**  
**DEGREE: MASTER OF SCIENCE (M.S.)**  
**THESIS OPTION, NON-THESIS**

**OPTION**  
**MAJOR: BIOLOGICAL SCIENCE**  
**DEGREE: DOCTOR OF PHILOSOPHY**

**Michael Ivy, Ph.D., Graduate Coordinator**

The Department of Biological Sciences offers graduate programs leading to the Master of Science (M.S.) degree in Biology and the Doctor of Philosophy (Ph.D.) degree in Biological Science. Both curricula are designed to prepare scholars for the pursuit of research careers in academia, government, and industry, and to improve the level of competency of high school, college, and university teachers. The Ph.D. in Biological Science is a degree program offered by the Department of Biological Sciences and the Department of Agricultural and Environmental Sciences in the College of Agriculture, Human, and Natural Sciences. Programs of study involve cellular and molecular biology, plant and environmental Sciences and biochemistry. The emphasis of this program is to train scientists in biological research who will be highly competent to teach in higher education and who can work in industry and with other biologists, biochemists, engineers, agricultural scientists, and others to develop solutions to problems that have an impact on our quality of life. Admissions procedures for the Ph.D. program are outlined under the Department of Biological Sciences. The major advisor will be appointed by the department offering the student's primary emphasis. Course descriptions are listed under the respective departments.

### Admission Requirements: M.S. Program

Unconditional admission to the M.S. program requires the applicant to have a bachelor's degree from an accredited four-year college or university, a minimal score of 800 calculated from the GPA multiplied by 200 and added to the GRE combined verbal and quantitative scores, two letters of recommendation and a personal statement. Also required is that the student will have accumulated a minimum of 24 acceptable semester hours in biology plus a minimum of four semester hours of biochemistry. The Departmental Admissions Committee will base admission upon these materials and additionally, will evaluate the applicant's science course GPA and may request a personal interview to determine the applicant's potential for success in the program.

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

### Degree Requirements: M.S. Program

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

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

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

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

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

### Program of Study: M.S. Program

The degree candidate must file a program of study after completing at least nine semester hours of graduate credit, but before completing fifteen hours of graduate credit.

The program lists the courses which will be used to satisfy degree requirements, and details how other requirements will be met. The student may later change the program of study with the written approval of the Department and the Graduate School.

### Admission to Candidacy: M.S. Program

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

### Admission Requirements: Ph.D. Program

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

Admission requires that the applicant have a bachelor's degree from a fully accredited four-year college or university, a minimal score of 900 calculated from the GPA multiplied by 200 and added to the GRE combined verbal and quantitative scores. Students admitted to the program must take a Departmental diagnostic examination that will be used by the admissions committee to design a curriculum to eliminate any identified weaknesses. After passing the recommended courses with a grade of B or better in each, the student will begin the Ph.D. curriculum.

### Degree Requirements: Ph.D. Program

Degree candidates must complete the core of required graduate courses (24 hours) with a grade of B or better in each course, pass the comprehensive examination, and gain approval of their dissertation proposal prior to obtaining admission to candidacy for the doctoral degree. Students may have a "C" grade in no more than two courses (6 credit hours), neither of which can be a core course. No "D" or "F" grades are acceptable. A student who receives a grade of "C" in excess of six credits must repeat this course and achieve at least a "B".

After gaining admission to candidacy the student must complete an approved curriculum (24 hours minimum of electives set by the student's research advisory committee), enroll in Graduate Seminar (BIOL 7010, 7020), complete a dissertation (24 hours), and successfully defend the dissertation prior to gaining the Ph.D. degree (Please refer to Biological Sciences Graduate Student Handbook for specific dissertation requirements). A student entering with a Master's degree may have applicable hours transferred toward the Ph.D. program, as determined by the Advisory Committee. The total number hours required is 76.

### Required Courses: 24 Hours

#### To be completed prior to Admission to Candidacy

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

**After Admission to Candidacy: 52 Hours**

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

**Graduate Elective Courses**

BIOL 5070, 5080	Methods of Teaching Science in the College/University Setting	6
BIOL 5130	Evolution	3
BIOL 5140, 5150	Special Problems I, II	3, 3
BIOL 5160	Environmental Genetics	3
BIOL 5170	Advanced Genetics	3
BIOL 5180	Cell Biology	3
BIOL 5190	Ecology	3
BIOL 5200	General Physiology	3
BIOL 5210	Embryology	3
BIOL 5220	Advanced Parasitology	3
BIOL 5230	Arthropods and Diseases	3
BIOL 5240	Systemic Physiology	3
BIOL 5300	Plant Physiology	3
BIOL 5400	Microbial Genetics	3
BIOL 5410	Molecular Genetics	3
BIOL 5460	Immunology	3
BIOL 5470	Special Topics in Immunology	3
BIOL 6040	Individual Studies	3
BIOL 6100	Frontiers in Molecular Science	3
BIOL 6110	Individual Research	3
BIOL 6150	Genomics	3
BIOL 6210	Introduction to Neuropharmacology	3
BIOL 6560	Techniques of Electron Microscopy	3
BIOL 7120	Molecular Biology	3
BIOL 7130	Molecular Genetics	3
BIOL 7170	Selected Topics in Molecular Genetics	3
BIOL 7180	Advanced Cell Biology	3
BIOL 7190	Advanced Molecular Biology	3
BIOL 7260	Neurobiology	3
BIOL 7270	Selected Topics in Neurobiology	3
BIOL 7410	Advanced Microbiology	3

**Admission to Candidacy: Ph.D. Program**

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

**MINOR**

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

**DESCRIPTION OF COURSES**

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

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

**BIOL 5100. LITERATURE AND METHODS IN RESEARCH. (3)** The methods of literature review, with primary emphasis on methods in biological research and research laboratory rotation. The student is expected to concentrate on literature in the student's proposed area of research and rotate through three research laboratories (4 weeks each) of the student's choice. Required of all degree candidates. Formerly BIOL 5170.

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

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

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

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

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

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

**BIOL 5180. CELL BIOLOGY. (3)** The structure and behavior of the cell and its components with special emphasis on mitosis and meiosis. Prerequisite: permission of instructor. Two lectures and one laboratory period. Required of all degree candidates. (Formerly BIO 518)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**BIOL 6150. GENOMICS. (4)** This course will provide students with an overview of genomes from viruses to vertebrates, as well as an introduction to genomics approach to fundamental problems in current biology. Specific areas that will be discussed include large scale sequencing projects, genomes structure and variation, comparative genomics, genome-wide analysis of genes and proteins. The course will familiarize student with current methods used in DNA microarrays and proteomic analysis. This course will be literature-lecture based, with lab exercises on microarray and protein 2 D gel separations and sample preparation for mass spectrometry. Prerequisite: permission of instructor.

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

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

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

Each course may be repeated once for an additional hour of credit. BIOL 5010 and 5020 are prerequisites to 7010, and 7010 is a prerequisite to 7020.

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

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

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

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

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

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

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

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

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

## GRADUATE FACULTY

Mary Ann Asson-Batres, Associate Professor

B.S., 1970, University of Portland; M.A.T., 1971, University of Chicago; M.S., 1982, University of Oregon; Ph.D., 1990, Oregon Health Sciences University

Anthony Ejiofor, Associate Professor

B.S., 1976, Ph.D., 1983 University of Nigeria, Nsukka

Hugh Fentress, Assistant Professor

B.S., 1999, Tennessee State University; Ph.D. 2005, Vanderbilt University

Philip F. Ganter, Associate Professor

B.S., 1973, Glassboro State College; Ph.D., 1981, University of North Carolina, Chapel Hill

Defeng Hui, Assistant Professor

B.S., 1989, Yangzhou University, M.S., 1994, Yangzhou University, University of Oklahoma

Michael Ivy, Associate Professor

B.A., 1978, University of Southern Illinois; Ph.D., 1986, University of Illinois

Terrance L. Johnson, Professor and Department Head

B.S., 1974, M.S., 1976, East Texas State University; Ph.D., 1985, University of North Texas

E. Lewis Myles, Professor

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

Quincy Quick, Assistant Professor

B.S., 1994, Ferrum College, Virginia; M.S.1996, Virginia State University; Ph.D. 2001, New Mexico State University

John T. Robinson, Assistant Professor

B.S., 1985, North Carolina Central University; Ph.D., 1993, University of North Carolina at Chapel Hill

Venkatashwarup Tiriveedhi, Assistant Professor

MBBS., 2002, Osmania Medical College, India; Ph.D. 2007, The University of Southern

Xiaofei Wang, Assistant Professor

B.S., 1983, Sichuan University; M.S., 1987, Sichuan University; Ph.D., 1999, The University of Hong Kong (Hong Kong)

Benny Washington, Jr., Associate Professor

B.S., 1975, M.S., 1979, Tennessee State University; Ph.D., 1985, Atlanta University

## DEPARTMENT OF CHEMISTRY

**Mohammad Karim, Ph.D., Head**

**201 Chemistry Building**

**615-963-5321**

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**mkarim@tnstate.edu**

**MAJOR: CHEMISTRY**

**DEGREE: MASTER OF SCIENCE (M.S.)**

**CONCENTRATIONS: CHEMISTRY AND BIOCHEMISTRY**

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

### Admission Requirements

Unconditional admission to the M.S. program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and a composite score of at least 289 on the Graduate Record Examination. Applicants have the option of taking the subject test in order to bring the combined score to 289 or higher. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application.

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 293; if the GPA is between 2.0 and 2.24, the GRE score must be 1,000.

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

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

## Degree Requirements

The Department offers both thesis and non-thesis options in the Master of Science degree program. A minimum of 30 semester hours of approved courses are required for the M.S. degree under the thesis option, and a minimum of 35 semester hours are required under the non-thesis option. Students who choose the non-thesis option must pass a comprehensive examination (passing score 70% or above) taken no earlier than the term in which they complete their course work. Students interested in pursuing research careers in the academia, government or industries are highly encouraged to take the thesis option.

There is no foreign language reading requirement for the M.S. degree in Chemistry.

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

**1. Major Field Core:** Total credits: 11 (thesis option and non-thesis option)

Rubric/Number	Course Title	Credit Hours
CHEM 5210	Advanced Organic Chemistry I	3
CHEM 5510	Advanced Analytic Chemistry	3
CHEM 5600	Spectroscopic Methods	3
CHEM 6005	Seminar, Part I	1
CHEM 6006	Seminar, Part II	1
<b>TOTAL</b>		<b>11</b>

## 2. Concentrations(s):

### 2.1 Chemistry concentration: Hours-13/6 (Thesis/Non-Thesis)

Rubric/Number	Course Title	Credit Hours
CHEM 5000	Advanced Inorganic Chemistry I	3
CHEM 5310	Advanced Physical Chemistry I	3
CHEM 5110*	Research	5
CHEM 5120*	Thesis	2
<b>TOTAL</b>		<b>13</b>

### 2.2 Biochemistry concentration: Hours- 16/9 (Thesis/Non-Thesis)

Rubric/Number	Course Title	Credit Hours
CHEM 5410	Advanced Biochemistry I	3
CHEM 5420	Advanced Biochemistry II	3
CHEM 6406	Special Topics in Biochemistry	3
CHEM 5110*	Research	5
CHEM 5120	Thesis	2
<b>TOTAL</b>		<b>16</b>

\*Not required for non-thesis option

**3. Electives:** (Include descriptions, directions, or restrictions that may apply.)

**3.1 Chemistry concentration:** 6 hrs. for thesis and 18 hrs. for non-thesis option.

Select from the list below

Rubric/Number	Course Title	Credit Hours
CHEM 5010	Advanced Biochemistry	3
CHEM 5220	Advanced Topics in Organic Chemistry II	3
CHEM 5320	Advanced Physical Chemistry II	3
CHEM 5410	Advanced Biochemistry I	3
CHEM 5420	Advanced Biochemistry II	3
CHEM 6200	Biochemistry of Cellular Signal Transduction	3
CHEM 6405	Special Topics in Analytical Chemistry	3
CHEM 6406	Special Topics in Biochemistry	3
CHEM 6407	Special Topics in Inorganic Chemistry	3
CHEM 6408	Special Topics in Organic Chemistry	3
CHEM 6409	Special Topics in Physical Chemistry	3
CHEM 6500	Cancer Biochemistry and Biology	3
CHEM 6800	Advanced Pharmacology	3

Or any 5000 or 6000-level courses in Biology, Mathematics, Physics or Engineering would satisfy the elective requirement.

**3.2 Biochemistry concentration:** 6 hrs. for thesis (one 3 hour course must be chosen in the field of Biochemistry) and 15 hrs. for non-thesis. Students following biochemistry non-thesis option are required to take a minimum of 15 hours of biochemistry courses. Choose the courses from the list above.

CHEM 5000	Advanced Inorganic Chemistry I	3
CHEM 5220	Advanced Organic Chemistry II	3
CHEM 5310	Advanced Physical Chemistry I	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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**CHEM 6200. BIOCHEMISTRY OF CELLULAR SIGNAL TRANSDUCTION.** (3) Study of the biochemical processes involved in cellular responses to signal molecules, such as hormones. Focus on the mechanisms by which cells transform extracellular signals into changes in cellular function. Pre-requisites: **CHEM 3410, CHEM 5410**, or permission of the instructor. Offered in the fall.

**CHEM 6500. CANCER BIOCHEMISTRY AND BIOLOGY:** (3) An in-depth study of the biochemical and biological basis of cancer. Topics include biochemistry/biology of: cellular oncogenes; growth factor receptors; tumor suppressors; angiogenesis; invasion and metastasis; and cancer treatment. Prerequisites: **CHEM5410** or Permission of the instructor. Three hours of lecture per week. Offered only in Spring

**CHEM 6800 ADVANCED PHARMACOLOGY.** (3) An in-depth discussion of the principles of pharmacology and how it applies to the evaluation and development of drugs. Topics covered include pharmacokinetics, absorption, metabolism, distribution, transport mechanisms and clinical aspects. Prerequisite: **CHEM 3410**. Offered only in the Fall.

## GRADUATE FACULTY

Mohammad Al-Masum, Associate Professor

B.S., 1984, M.S., 1986, Dhaka University (Bangladesh); Ph.D., 1996, Tohoku University (Japan).

Yousef Beni, Assistant Professor

B.S. 1995, M.S. 1997, Sharif University of Technology, Ph.D., 2002, Sharif University of Technology and Justus-Liebig University.

William Y. Boadi, Professor

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

Theodore J. Duello, Assistant Professor

B.S., 1996, Quincy College; Ph.D., 1971, St. Louis University (Missouri).

Sujata Guha, Associate Professor

B.S., 1994, University of Dubuque; M.S., 1997, Purdue University; Ph.D., 2000, Purdue University (Indiana)

Mohammad R. Karim, Professor and Head

B.S., 1978, M.S., 1980, Jahangirnagar University (Bangladesh); Ph.D., 1989, Kent State University (Ohio).

Joshua Moore, Associate Professor

B.S., 1998, University of Pittsburgh at Johnstown; Ph.D., 2003, Vanderbilt University (Tennessee)

Cosmas O. Okoro, Professor

B.S., 1981, M.S., 1986, North Carolina Central University; Ph.D., 1993, Howard University (D.C.)

Nsoki Phambu, Associate Professor

B.S., 1989, Université Denis Diderot, Paris (France); M.S., 1992, Université Henri Poincaré, Nancy I (France); Ph.D., 1996, Université Henri Poincaré, Nancy I (France)

Tasneem Siddiquee, Assistant Professor

B.S., 1993; M.S., 1994, Jahangirnagar University; Ph.D., 2007, University of Wisconsin-Milwaukee (Wisconsin).

Koen P. Vercruyse, Associate Professor

B.S., 1990, University of Ghent; Ph.D., 1995, University of Ghent (Belgium)

Margaret M. Whalen, Professor

B.S., 1979, South Dakota School of Mines and Technology; Ph.D., 1984, University of New Mexico School of Medicine (New Mexico).

Mu Zheng, Assistant Professor

B.S., 1987, M.S. 1990, Zhongshan (Sun Yat-Sen) University (China), D.A. 1997, Middle Tennessee State University, Murfreesboro, TN

# **COLLEGE OF BUSINESS**

# COLLEGE OF BUSINESS

**Millicent Lownes-Jackson, Ph.D., Dean Office: K426,  
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**Anis Mnif, MBA, Director of Graduate Programs  
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## **DEGREE: MASTER OF BUSINESS ADMINISTRATION (M.B.A.)**

### **GENERAL STATEMENT**

The College of Business at Tennessee State University is strongly grounded with a stellar reputation afforded by accreditation at both the undergraduate and graduate levels by the major accrediting agency for business schools - AACSB International – The Association to Advance Collegiate Schools of Business. The College is poised to successfully fulfill its mission with new academic programs, new corporate alliances, new international partners, and a newly renovated academic facility on the Avon Williams Campus which includes a state-of-the-art financial trading center.

### **VISION STATEMENT**

The College of Business strives to achieve national and international prominence in educating current and future business professionals for the global economy.

### **MISSION STATEMENT**

Our mission is to educate current and future business professionals through innovative teaching and research focused on contemporary business concepts for the global economy, complemented with a commitment to service and lifelong learning.

### **GUIDING PRICIPLES AND CORE VALUES**

- Accountability
- Continuous Improvement
- Diversity
- Ethical Conduct
- Excellence
- Global Perspective
- Scholarship
- Service
- Shared Governance

### **Program Overview**

The MBA program at TSU is committed to providing quality academic programs, as demonstrated through our accreditation by AACSB International.

We are also conveniently located in the heart of Nashville's downtown commercial district, competitively priced, and designed for full-time, part-time, and working professionals with all of our courses offered in the evening.

The TSU MBA curriculum is a broad-based management education that provides you with the knowledge and skills to assume leadership positions in public and private companies. Adding to the quality of the MBA program is a dedicated faculty with outstanding credentials in teaching, research, and business. One hundred percent of the faculty holds doctorate degrees from a broad range of leading universities in the United States and abroad.

Students benefit from a faculty dedicated to their fields of study and willing to work with students both inside and outside the classroom. Because of small class sizes, MBA candidates have the opportunity to question, explore, and discuss subject matter in great detail in a professional setting.

Graduate students enjoy the prestige of matriculating in the oldest and most seasoned Master of Business Administration program offered in Nashville, having commenced in 1970. Candidates for the MBA come from all stations of life and all regions of the U. S., as well as Asia, Africa, Europe, Caribbean, and other locations around the world.

The MBA program is offered in two different delivery options; the **MBA Traditional Option** and the **MBA Accelerated Option**. The campus classroom experience for both the traditional and Accelerated Option is enhanced with web based learning opportunities. Both the MBA Traditional Option and the Accelerated Option, share the same course objectives/learning outcomes.

The **MBA Traditional Option** is designed for the working professional and non-traditional student. The Traditional Option consists of 12 courses for 36 hours of credit. All courses are offered in the evenings from 5:30-8:30 P.M. Monday through Thursday at the Avon Williams Campus located in downtown Nashville minutes from the financial center, major entertainment venues, the riverfront and convenient housing. The MBA Traditional Option offers concentrations in Accounting, Management of Information Systems, Finance, Supply Chain Management or General Business. Courses are available on campus and meet once a week Monday through Friday, 5:30-8:30 P.M.

The **MBA Accelerated Option** is a progressive Master of Business Administration Program directed to adult learners. This innovative accelerated learning option offers the MBA degree in a shorter time-frame while achieving the same number of class hours and learning outcomes as the College's traditional MBA program. The Accelerated Option consists of 36 credit hours that are completed in 12 short months leading to the General MBA. The MBA Accelerated Option requires 11 courses (33 credit hours) and one elective course (3 credit hours).

Classes are conveniently offered:

- Fridays from 5:30 p.m. – 9:30 p.m. (on the Avon Williams Campus campus)
- Saturdays from 8:00 a.m. – 4:00 p.m. (on the Avon Williams Campus Campus)
- Fully online during the summer

#### Program Goals:

The MBA Program adheres to the core values of the College and is designed to provide strategic, behavioral and technical competencies relevant to contemporary business practice. The goals of the program provide guidance for course design and development for the enhancement of student skills and to add value in both content and analytical/critical faculties.

#### The specific program learning goals are:

**Goal 1:** Students will be able to apply quantitative and qualitative techniques to make effective business decisions.

**Goal 2:** Students will be able to apply relevant conceptual knowledge to assess new business situations.

**Goal 3:** Students will develop effective teamwork skills.

**Goal 4:** Students will demonstrate an understanding of global dimensions of business.

**Goal 5:** Students will demonstrate an understanding of ethical issues in business

#### Admission Requirements:

Anyone wishing to take courses for graduate credit must apply for admission to the Graduate School. General admission requirements for the Graduate School are described in the Admissions, Regulations, Policies Section of this Catalog. In addition to requirements of the Graduate School, MBA applicants must meet the following requirements of the College of Business.\*

1. 950 points based on the formula: 200 times 4-year undergraduate GPA plus GMAT score or;
2. 1000 points based on the formula: 200 times Junior-senior GPA plus GMAT score.

\* Note – A limited number of exceptions to the above standards may be given for extensive professional experience.

All documents, including official transcripts, must be received by the Graduate School before a student will be considered for admission. Conditional admission is granted for one semester if a student has a 3.0 undergraduate GPA, has taken all prerequisites, and agrees to take the GMAT during their initial semester in the MBA Program. To remain in the program, the student must meet the 950 or 1,000 point criteria cited above.

#### All applicants are:

1. expected to be competent in oral and written English;
2. expected to satisfy all prerequisite requirements in a particular discipline before enrolling in graduate-level courses in that discipline for credit;
3. 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.

#### Transfer of Credit Policy

Students may transfer up to 12 credit hours of approved coursework from an AACSB Accredited College of

Business, or may transfer up to 6 credit hours of approved coursework from a regionally accredited University.

#### 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” at least one full semester 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 should attend commencement. The MBA degree may be awarded in absentia upon prior approval by the Dean of the Graduate School.

The TSU MBA curriculum is a broad-based management education that provides students with the knowledge and skills to assume leadership positions in the public and private companies. The MBA curriculum consists of 36 hours of credit. Students that do not have an undergraduate degree in business will need to take foundation courses prior to beginning the graduate coursework. These courses may include the foundation courses listed below.

#### Foundation Courses

Undergraduate Foundation Courses	Sem. Hrs.		Graduate Foundation Courses	Sem. Hrs.
Accounting Principles & Business Law	9 6		ACCT 5000 BISI 5000	3 3
Information Systems & Statistics				
Economics Principles & Business Finance	9	<b>OR</b>	ECON 5000	3
Management & Marketing Principles	6		MGMT 5000	3

<b>Total</b>	<b>30</b>		<b>12</b>
<b>MBA Traditional Option Program of Study</b>			
ACCT 6010	Accounting and Business Decisions		3
BISI 6130	Management & Evaluation of Information Systems		3
ECON 6010	Statistical Decision Making		3
ECON 6110	Managerial Economics		3
FINA 6300	Managerial Finance		3
MGMT 6020	Organizational Behavior, Ethics and Leadership		3
MGMT 6060	Operations Management		3
MGMT 6110	Business Strategy & The Economic Environment		3
MKTG 6050	Marketing Management		3
<b>MBA Traditional Option Elective Requirements</b>			<b>9</b>
3 elective courses in one area of concentration.			Hours
<b>Total Semester Hours</b>			<b>36</b>
<b>Undergraduate Foundation Courses</b>	<b>Sem. Hrs.</b>	<b>Graduate Foundation Courses</b>	<b>Sem. Hrs.</b>
Accounting Principles & Business Law	9	ACCT 5000	3
Information Systems & Economics Principles & Business Finance	6	BISI 5000	3
		<b>OR</b>	
Economics Principles & Business Finance	9	ECON 5000	3
Management & Marketing Principles	6	MGMT 5000	3
<b>Total</b>	<b>30</b>		<b>12</b>
<b>MBA Traditional Option Program of Study</b>			
ACCT 6010	Accounting and Business Decisions		3
BISI 6130	Management & Evaluation of Information Systems		3
ECON 6010	Statistical Decision Making		3
ECON 6110	Managerial Economics		3
FINA 6300	Managerial Finance		3
MGMT 6020	Organizational Behavior, Ethics and Leadership		3
MGMT 6060	Operations Management		3
MGMT 6110	Business Strategy & The Economic Environment		3
MKTG 6050	Marketing Management		3
MBA Traditional Option Elective Requirements			9
3 elective courses in one area of concentration.			Hours
<b>Total Semester Hours</b>			<b>36</b>

**MBA Traditional Option Concentrations**

- Accounting
- Finance
- Management Information Systems

- Supply Chain

<b>Concentration I: Accounting*</b>		<b>9 hours</b>
ACCT 6170	Federal Tax Research	3
ACCT 6200	Accounting Information Systems	3
ACCT 6250	International Accounting	3

**\*MBA Concentration in Accounting students should have completed Intermediate Accounting I and II, Cost**

**Accounting, and Income Tax I as prerequisites for graduate accounting courses.**

<b>Concentration II: Finance</b>		<b>9 hours</b>
FINA 6400	Financial Institutions, <i>Prerequisite: FINA 6300</i>	3
FINA 6450	Commercial Banking, <i>Prerequisite: FINA 6300</i>	3
FINA 6500	Corporate Asset Management, <i>Prerequisite: FINA 6300</i>	3
FINA 6550	Financial Structure Management, <i>Prerequisite: FINA 6300</i>	3
FINA 6600	Investments, <i>Prerequisite: FINA 6300</i>	3
FINA 6650	Portfolio Management	3

<b>Concentration III: Supply Chain Management</b>		<b>9 hours</b>
MGMT 6260	Integrated Supply Chain Management	3
MGMT 6220	Procurement Management	3
MKTG 6100	Logistics	3

<b>Concentration IV: Management of Information Systems</b>		<b>9 hours</b>
BISI6800	Integrated Supply Chain Management	3
BISI6550	Procurement Management	3
BISI6750	Logistics	3
BISI6250	Strategic Information Systems	3
BISI6300	Project Management & Analysis	3
BISI6370	Contemporary Information Technologies	3
BISI6400	Decision Support Systems	3

**CONCENTRATION V: GENERAL MBA 9 hours**

Any three graduate elective business courses from any of the concentrations above.

**MBA ACCELERATED OPTION PROGRAM OF STUDY**

<b>SPRING</b>		<b>Sem. Hrs.</b>
Weeks 1-4	Statistical Decision Making	3
Weeks 5-8	Managerial Decision Making	3
Weeks 9-12	Management & Evaluation of Information	

	Systems	3
Weeks 13-16	Managerial Finance	3
<b>SUMMER</b>		
1 <sup>st</sup> Session	Decision Support Systems	3
	Corporate Asset Management or Logistics	3
2 <sup>nd</sup> Session	International Accounting	3
	Managerial Economics	3
<b>FALL</b>		
Weeks 1-4	Marketing Management	3
Weeks 5-8	Behavior in Organizations	3
Weeks 9-12	Operations Management	3
Weeks 13-16	Business Strategy & the Economic Environment	3
<b>Total Semester Hours</b>		<b>36</b>

## COURSE DESCRIPTIONS

### ACCOUNTING

**ACCT 5000. FOUNDATION IN ACCOUNTING (3) (not for graduate credit).** A survey of basic accounting techniques with major emphasis on financial statement analysis and managerial uses of accounting information. Not required for students with undergraduate accounting backgrounds. May not be used for elective credit.

**ACCT 6010. ACCOUNTING AND BUSINESS DECISIONS (3).** Studies of financial and management accounting information and reports to make informed business decisions. Prerequisites: ACCT 2020 or ACCT 5000.

**ACCT 6170. FEDERAL TAX RESEARCH (3).** The development of skills in federal tax research, including locating sources of tax authority and communicating the results of research. Prerequisites: ACCT 3070, ACCT 6010.

**ACCT 6200. ACCOUNTING INFORMATION SYSTEMS (3).** Uses of information systems in tax, managerial/cost, auditing, and financial reporting processes. Evaluation of implementation alternatives. Prerequisites: ACCT 6010.

**ACCT 6250. INTERNATIONAL ACCOUNTING (3).** Research International Financial Reporting Standards (IFRS) and global convergence of accounting standards. Investigate transfer prices and management planning and control in global environment. Prerequisite: ACCT 6010.

**ACCT 6990. INDEPENDENT STUDY (1-3).** A study of current literature applicable to the practice of professional accounting that allows outstanding accounting students to investigate approved accounting topics of the student's major area of interest. Prerequisites: ACCT 6010 and consent of Dept. Head.

### BUSINESS INFORMATION SYSTEM

**BISI 5000. INFORMATION SYSTEMS AND STATISTICS (3) (not for graduate credit).** This survey course introduces students to information systems technology and its use as a business and management tool. It adopts an end-user oriented approach to the use, effects, development and management of information systems in organizations. In addition, the student is exposed to statistics with an emphasis on business and economic applications.

**BISI 6130. MANAGEMENT AND EVALUATION OF INFORMATION SYSTEMS (3).** This is a survey course of information technology (IT), and its impact and role in the business environment. Issues concerning the strategic, tactical, and operational uses of IT and information systems are examined. The challenges and the methods of managing IT are presented using the socio-technical approach. Types of information systems and their application within organizations are discussed through case studies. Prerequisite: BISI 5000 or equivalent.

**BISI 6250. DECISION SUPPORT SYSTEMS (3).** The key technical and managerial issues in the development and use of decision support systems in organizations are addressed. The strategic management decision making process and the role of DSS in the process are explored. Contemporary topics including Expert Systems, Executive Information Systems, data warehousing, data visualization, and Group Decision Support Systems are reviewed. Research effort is on the real life use of these technologies in specific business areas. Prerequisites: BISI 5000 or instructor's consent.

**BISI 6300. BUSINESS TELECOMMUNICATIONS (3).** Provides a broad overview of the telecommunications field, the implications for business and industry and a current review of the research literature.

**BISI 6370 SEMINAR IN INFORMATION SYSTEMS (3).** Provides for the study of the current literature applicable to information systems technology. Topics investigated vary based upon current trends, issues, and problems that surface in the computing industry.

**BISI 6550. PROJECT MANAGEMENT & ANALYSIS (3).** This course explores the techniques to successfully manage business projects. The topics covered include scope, time, cost, quality, human resource, communications, risk, integration and procurement management. The processes covered include initiating, planning, executing, controlling, and closing of projects. Students will have the opportunity to use current project management software.

**BISI 6750. CONTEMPORARY INFORMATION TECHNOLOGIES (3).** This course introduces students to current IT related issues, technologies, and business applications. The range of topics include diverse topics such as local area networks, wide area networks, expert systems, decision support tools, e-commerce, and supply chain management. Students will also develop simple business applications using popular business software. Upon completion of the course, the student will have a good understanding of the role of various technologies in organizations.

**BISI 6800. STRATEGIC INFORMATION SYSTEMS (3).** This course explores the relationship between organizational strategies and the use of information systems that support those strategies. Case studies of successful and unsuccessful information system implementations will be used to show the importance of aligning information systems to business strategy.

**BISI 6990. INDEPENDENT STUDY (1-3).** This course is designed to provide graduate students an opportunity to investigate and learn about topics in Information Systems that they are interested in, but are not able to get in regular courses. The student will develop the requisite skills to conduct the research, and report the findings. The student, in conjunction with a BIS faculty advisor, will decide on the topic and the scope of the research. **Prerequisite: Approval of instructor.**

### ECONOMICS

**ECON 5000. FOUNDATION IN ECONOMICS AND FINANCE. (3) (not for graduate credit)** A basic study of macro and micro economic theory and corporate finance. Topics include fiscal & monetary policy, market structure, international trade, analytical techniques, capital budgeting, cost of capital, and financial planning. (4) Satisfies finance and economic MBA prerequisites. **Prerequisites: ACCT 2020 or ACCT 5000.**

**ECON 6010. STATISTICAL METHODS. (3)** Development and application of probability and inferential statistics. Topics covered include Z-tests, T-tests, multiple regression and correlation, analysis of variance, and time series analysis. **Prerequisites: ECON 2010 and 2040or ECON 000.**

**ECON 6110. MANAGERIAL ECONOMICS. (3)** Application of economic theory to business decision making; emphasis is on profit objectives, measurement and forecasting demand, and costs. **Prerequisite: ECON 2120 or ECON 5000 and ECON 2010.**

**ECON 6990. INDEPENDENT STUDY (1-3).** This course is designed to develop research skills necessary to deal with complex managerial problems, as well as problems associated with other business disciplines, e.g., Accounting, Marketing, Information Systems and Quantitative Methods. 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: 9 credit hours of MBA course work and prior approval of instructor.**

## FINANCE

**FINA 6300. MANAGERIAL FINANCE. (3)** Refined techniques of analysis, optimal financing decision, theory and cases in general corporate finance. **Prerequisite: FINA 3300.**

**FINA 6400. FINANCIAL INSTITUTIONS (3).** Characteristics, allocation of funds, fund management, growth, government regulation, critical evaluation of economic importance. **Prerequisite: FINA 6300.**

**FINA 6450. COMMERCIAL BANKING (3).** Reading, cases, balance sheet management, structure, markets competition, capital adequacy, profitability, quantitative techniques of analysis, computer simulations. **Prerequisite: FINA 6300.**

**FINA 6500. 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: FINA 6300.**

**FINA 6550. 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 :FINA 6300.**

**FINA 6600. INVESTMENTS (3).** Evaluation and selection of securities, investment decision process, value and price, analysis of companies, capital market theory. **Prerequisite: FINA 6300**

**FINA 6650. PORTFOLIO MANAGEMENT (3).** Analytical approaches, theory of random walks, empirical evidence, portfolio theory, capital market theory. **Prerequisite: FINA 6300.**

## MANAGEMENT

**MGMT 5000. FOUNDATION IN MANAGEMENT AND MARKETING. (3) (not for graduate credit)** This course covers concepts found in principles of management, operations management, and marketing. Topics will be selected in those areas that enable students to do advanced work in these fields of study.

**MGMT 6020. ORGANIZATIONAL BEHAVIOR, ETHICS AND LEADERSHIP. (3)** This course focuses on behavior, ethics, and leadership. The course is highly experiential, and is built around a variety of self-assessment instruments, experiential learning exercises, and small group activities. Special emphasis is placed on ethics and leadership topics, with other key organizational behavior topics covered, such as justice, group and team dynamics, communication, job satisfaction, commitment, motivation, stress, and personality. **Prerequisite: MGMT 3010 or equivalent.**

**MGMT 6060. OPERATIONS MANAGEMENT. (3)** An analysis of operations management concepts, tools, and practices as applied to manufacturing and service organizations. Emphasizes the use of operations strategy to gain competitive advantage. Covers areas such as process analysis and capacity planning, product design and process selection, facility location and layout design, supply chain management, enterprise resource planning, and e-operations. **Prerequisites: ECON 2010 or BISI 5000.**

**MGMT 6110. BUSINESS STRATEGY AND THE ECONOMIC ENVIRONMENT. (3)** Examines corporate and business strategy formulation and implementation through the use of case studies. Integrates knowledge of all the business functional areas for establishing and attaining organizational objectives for efficiency, effectiveness, and competitiveness. Students are challenged to think about the role of ethics and the global nature of the current business environment in decision making. Enrollment priority is given to MBA students in the last semester of their program. **Prerequisites: All other core MBA courses.**

**MGMT 6220. PROCUREMENT MANAGEMENT. (3)** This course presents the knowledge and insights into strategies, processes and operations of procurement. Contemporary issues include purchasing and outsourcing, supplier management, negotiation, information systems, inventory, performance measurement, and globalization. **Prerequisite: MGMT 6060, MKTG 6050, or consent of the instructor.**

**MGMT 6260. SUPPLY CHAIN MANAGEMENT. (3)** Planning and design of systems for goods and service flows in supply chain. Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise resource planning (ERP) systems. Use of e-business in the integration, control, and execution of business processes in the supply chain. **Prerequisite: MGMT 6060, ECON6010.**

**MGMT 6990. INDEPENDENT STUDY. (1-3)** This course is designed to develop research skills necessary to deal with complex managerial problems, as well as problems associated with other business disciplines, e.g., Accounting, Economics, Finance, Marketing, Quantitative Methods, and Real Estate and Urban Development. The student, faculty advisor, and whenever possible, an executive from an organization where the student is employed or has a particular interest, cooperatively develop a study to seek a solution to an identifiable problem or opportunity. **Prerequisite: 12 credit hours of MBA course work and prior approval of the instructor.**

## MARKETING

**MKTG 6050. MARKETING MANAGEMENT. (3)** An analytical, managerially oriented course emphasizing decision-making in the functional area of marketing. Management of the basic marketing functions. Case problems and marketing decision simulation. **Prerequisites: ACCT 5000 & MGMT 5000 or ACCT 2010 and ACCT 2020, FINA 3300, MGMT 3010, MKTG 3010.**

**MKTG 6100. Logistics (3)** The course provides a broad overview of logistics, with an emphasis on basic principles, concepts, and analytical tools involved in designing and planning. Contemporary issues include lean logistics, distribution channel's function, structure, and processes, collaboration and competition among channel members, global logistics, materials management, warehousing, transportation, and information systems. **Prerequisite: MKTG 6050 or instructor's consent.**

## GRADUATE FACULTY

**Dharmendra P. Dhakal, Professor**

B.A., 1973, M.A., 1976, Tribhuvan University; M.S., 1984, Ph.D., 1991, Southern Illinois University.

**Chunxing Fan, Associate Professor**

B.S. 1983, Lanzhou University of Technology; M.B.A., 2001, M.B.A., 2007, Rutgers University; Ph.D., 2007, Rutgers University

**Phyllis Flott, Associate Professor**

B.S., 1984, M.B.A., 1987, Emporia State University; Ph.D., 1996, University of North Texas

**Soumendra Ghosh, Professor and Department Chair**

B.A., 1973, M.A., 1975, University of Calcutta; Ph.D., 1987, Utah State University

**Carrie Hurst, Assistant Professor**

B.S., 2002, Central Michigan University; M.S., 2006, Ph.D., 2008, University of Georgia

**Eva Jermakowicz, Professor and Department Chair**

B.A., 1972, M.A., 1973, University of Warsaw; Ph.D., 1982, Warsaw Tech University

**Joel K. Jolayemi, Professor**

B.S., 1977, University of Ibadan; M.S., 1983, Ph.D., 1985, Case Western Reserve University

**Aurore Kamssu, Professor**

B.B.A., 1993, Advanced School of Economics and Commerce; M.A., 1996, University of Kansas; Ph.D., 2000, University of Mississippi

**David King, Associate Professor**

B.B.I.S. 1999, M.B.I.S., 2000, Ph.D., 2003, University of South Australia

**Kenneth K. Kungu, Assistant Professor**

B.A., 2001, Egerton University; M.S., 2005, Ph.D., 2010, Louisiana State University

**Xiaoming Li, Associate Professor**

B.E., 1993 Southeast University; M.S. 1997, Renmin University; M.S., 2000, Ph.D., 2003, Clemson University

**Millicent Lownes-Jackson, Professor and Dean**

B.A., 1972, Fisk University; M.B.A. 1975, Ph.D. 1981, Vanderbilt University

**Vaidotas Lukosius, Associate Professor**

B.E., 1996, Vilnius University; M.S., 1999, Helsinki University; Ph.D., 2003, New Mexico State University

**Nelson Modeste, Professor**

B.S., 1972, Tuskegee Institute; M.A., 1974, Ph.D., 1976, University of Florida

**Festus Olorunniwo, Professor and Department Chair**

B.S., 1972, University of Lagos; M.S., 1978, Polytechnic University of New York; Ph.D., 1981, University of Texas at Austin

**Achintya Ray, Associate Professor**

B.Sc., 1995, University of Calcutta; M.A., 1997, Delhi School of Economics; M.A., 2003, Ph.D., 2004, Vanderbilt University

**Stephen Shanklin, Associate Professor**

B.S.B.A., 1971, Murray State University; B.S., 1987, University of Tennessee at Martin; M.B.A., University of Tennessee at Martin; 1999, Ph.D., Saint Louis University

**Jeffrey S. Siekpe, Associate Professor, Interim Department Chair**

B.S., 1992, University of Science & Technology Ghana; M.S., 1997, Norwegian University of Science & Technology; M.B.A., 1999, Ph.D., 2003, University of Texas – Pan American

**Sharon V. Thach, Professor**

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

**Ramaprasad Unni, Associate Professor**

B.T., 1986, Indian School of Mines; 1989, M.B.A., Indiana Institute of Management; M.B., 1998, Ph.D., 2000, Indiana University

**Santosh Venkatraman, Professor**

B.A., 1984, Indian Institute of Technology; M.A., 1986, Ph.D., 1991, Texas A&M University

# **COLLEGE OF EDUCATION**

# COLLEGE OF EDUCATION

**Kimberly King-Jupiter, Ph.D., Dean**  
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## Vision

The College of Education aspires to be a place where students at both initial and advanced levels explore current research as they prepare to become competent and caring professionals who are able to work effectively with diverse populations.

Further, the College of Education seeks to provide students with global education opportunities, to inspire them toward a demonstrated commitment to service for others, and to provide them with the knowledge, skills, and dispositions necessary to excel in their chosen professions.

## Mission

The mission of the College of Education is to prepare teachers, counselors, psychologists, and administrators to work effectively with schools and communities.

Additionally, the College of Education provides all students with the technological skills, knowledge and commitment to diversity necessary for the provision of global and community service, and demonstration of professional excellence.

## Goals

1. To prepare elementary and secondary teachers, counselors, supervisors, administrators, school psychologists, counseling psychologists, special educators, and recreation workers, and wellness experts.
2. To provide opportunities for faculty and students to pursue research and its uses in solving the problems of education, mental and physical health.
3. To provide students with opportunities for knowledge and understanding of the multicultural society in which they live and their relationship and responsibility in such a society.
4. To provide a sound program of guidance and to work cooperatively with other departments and colleges of the University in implementing the program.

Graduate studies in the College of Education are designed to prepare students for service in a variety of educational settings. Graduates have obtained positions as administrators, leaders, 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

Heraldo Richards, Ph.D., Associate Dean

Post-baccalaureate candidates 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. Candidates' transcripts will be analyzed by the office to determine which courses candidates will need for licensure or endorsement. 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 should be sought after the first semester of coursework. Teacher licensure candidates must pass their relevant Praxis II tests prior to registering for student teaching or practicum. For more information please contact the Office of Teacher Education and Student Services in Room 112 Clay Hall or by phone at (615)-963-5459.

## Administrator License Requirements

Administrator licensure requirements are established by the State Board of Education. The Master of Education (M.Ed.) and the Education Specialist (Ed.S.) degrees in Instructional Leadership are designed to provide candidates with courses necessary to achieve the Instructional Leadership License-Beginning (ILL-B) in Tennessee. Aside from the requirements of the degree, all candidates seeking administrative licensure must meet admission requirements and must participate in a licensure specific interview process facilitated by university faculty and Local Education Agency (LEA) participants. Both university faculty and LEA participants must make a recommendation for admission into the licensure degree program. Additionally, all candidates for licensure must take and pass the School Leaders Licensure Assessment (SLLA) and the Comprehensive Examination. Students seeking administrative licensure only and not a degree must also meet the above mentioned requirements. Please note that licensure course requirements are subject to change in order to comply with any state mandated changes.

## Transitional Licensure

Tennessee State University offers a transitional Licensure program in partnership with local education agencies (e.g., Metropolitan Nashville Public Schools) and the Tennessee Department of Education. To be eligible for the program, candidates with at least a bachelor's degree must have verifiable knowledge of the teaching content area of interest and present a letter of intent to hire as the teacher of record from a local education agency. Once admitted to the program, candidates may renew the Transitional License no more than two times, provided satisfactory progress is made toward the completion of the program. Candidates may teach on a transitional license for a maximum of three years. Please contact the Office of Teacher Education and Student Services for further information.

## MASTER'S DEGREE

### MASTER OF EDUCATION DEGREE (M.ED.)

The Master of Education degree is offered in the following education programs: Instructional Leadership, Elementary Education, Special Education, and Curriculum and Instruction. See specific program requirements under departmental sections.

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. Certain programs or concentrations may have additional requirements.

## DOCTORAL DEGREES

### 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.

### DOCTOR OF EDUCATION DEGREE (Ed.D.)

The Doctor of Education (Ed.D.) Degree provides professional training for careers in teaching, educational leadership, and related educational services. The degree is offered in Curriculum and Instruction, and Educational Leadership.

## TRANSFER CREDITS

Students who have earned 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 a doctoral- 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 doctoral degree must have been taken within the last ten (10) years.

## RESIDENCY REQUIREMENT

Students in a doctoral 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 doctoral degree 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 faculty member to serve as the student's advisor. This person advises the student concerning programmatic requirements and planning the program of study.

## DOCTORAL COMMITTEE

The dissertation advisory committee consists of four faculty members who have graduate faculty status. At least three of them must be faculty members from the department in which the degree is sought. The fourth member must be a member of the graduate faculty from another department. This external person is typically identified by the thesis chairperson or the Dean of the graduate school. For dissertations, all four members of the advisory must be in place prior to the proposal meeting.

## ACADEMIC LOAD FOR DOCTORAL STUDENTS

Students who have made arrangements to pursue studies on a full-time basis may take twelve (12) hours per semester with the approval of the chair of their doctoral committee.

Students awarded graduate assistantships must take at least nine (9) hours per semester to fulfill the obligations of the assistantship.

## ACADEMIC STANDARDS

Grades of "C" or lower cannot count toward the doctoral degree, nor does the grade of "C" or lower meet eligibility requirements for the Qualifying or Comprehensive Examinations.

## CHANGE OF DOCTORAL MAJOR

If a student wishes to change from one major to another, both the current department and the prospective department must be aware of the possible change. The student who wishes to change majors must file with the Graduate School the following items:

1. A "Change of Program" form.

After this form is filed with the Graduate School, it is 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.

## TIME LIMITATION FOR CREDITS

Credits earned more than ten (10) years prior to the student's graduation cannot be applied toward meeting requirements for the doctoral degree. This limitation applies to all post-master's degree credit, excluding Educational Specialist study.

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 6000, EDAD 7120 or EDCI 7120, and EDAD 7180 must be included in these hours) and maintaining a minimum grade point average of 3.0.

## 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 6000, EDAD 7120 or EDCI 7120, and EDAD 7180 must be included in these hours) and maintaining a minimum grade point average of 3.0.

Students who have completed twenty-one (21) hours and have not taken the Qualifying Examination may not take additional courses, unless they are required prerequisites, without the written permission of the Dean of the College of Education. Courses taken without permission will not count in meeting degree requirements.

Performance on the Qualifying Examination is assessed by evaluation teams composed of faculty in the areas tested. Performance is assessed on a pass-fail basis. In the event of a failure, the evaluation team makes recommendations for remediation.

The student's Doctoral Advisor may recommend that the student be permitted to prepare for re-examination. In this event, the student and advisor, using the recommendations made by the evaluation team, will plan a program of study including independent study, additional course work, or both.

The student may take the Qualifying Examination a maximum of three (3) times. A third failure of any portion of the examination will result in the student's dismissal from the doctoral program.

## CANDIDACY

A student is admitted to candidacy after the successful completion of the Qualifying Examination and submission of an approved program of study to the Dean of the Graduate School.

## COMPREHENSIVE EXAMINATION

The Comprehensive Examination is a written examination administered in blocks of six to twelve hours. The examination will be given on days as determined by each department. All departments are responsible for either a written comprehensive examination or comprehensive project. Please see individual department requirements. 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 develop a written remediation plan which may include independent study, further course work, or both. The student's credit hour requirements may thus be extended. A copy of this remediation plan must be approved by the program and/or department head and a copy placed in the student file.

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 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 discounted 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. Discussion of the outcome of the defense, however, is between the candidate and his/her committee.

## DEPARTMENT OF EDUCATIONAL LEADERSHIP

Trinetia Respress, Ed.D., Department Chair

Office: 103 Clay Education Building

(615) 963-5450

[trespress@tnstate.edu](mailto:trespress@tnstate.edu)

The graduate programs in the Department of Educational Leadership lead to the Doctor of Education Degree in Educational Leadership with concentrations in PreK-12 Administration and Higher Education Administration, the Educational Specialist degree in Instructional Leadership with state licensure in Instructional Leadership, or the Education Specialist without licensure, and the Master of Education Degree in Instructional Leadership with state licensure in Instructional Leadership, the Master of Education without licensure, and the Master of Education in Career and Technical Education (CTE). Please check with your appointed advisor for program and course number changes. *All candidates must see their advisor prior to enrolling each semester.*

**MAJOR: EDUCATIONAL LEADERSHIP**  
**DEGREE: DOCTOR OF EDUCATION (Ed.D.)**  
**Concentrations: PreK-12 Administration and Supervision**  
**Higher Education Administration**

### Student Learning Outcomes:

Candidates who complete the program are educational leaders who have the knowledge and ability to promote the success of all students by:

- Facilitating the development, articulation, implementation, and stewardship of a school or district vision of learning supported by the school community.
- Promoting a positive school culture, providing an effective instructional program, applying best practices to student learning, and designing comprehensive professional growth plans for staff.
- Managing the organization, operations, and resources in a way that promotes a safe, efficient, and effective learning environment.
- Collaborating with families and other community members, responding to diverse community interests and needs, and mobilizing community resources.
- Acting with integrity, fairness, and in an ethical manner.
- Understanding, responding to, and influencing the larger political, social, economic, legal, and cultural context.
- Internship provides significant opportunities for candidates to synthesize and apply the knowledge and practice and develop the skills identified in the standards listed above through substantial, sustained, standards-based work in real settings, planned and guided cooperatively by the institution and school district personnel for graduate credit.

### Admission Requirements for Pre-K—12 Administration and Supervision and Higher Education Administration Concentrations

Admission to the program requires the applicant to have a master's or specialist degree from an accredited university, a graduate cumulative grade point average of 3.25 or better on a 4.0 scale on the last graduate degree, and submission of an official report of the Graduate Record Examination (GRE) score or Millers Analogies Test (MAT) Score. All applicants must submit test scores at the time of application.

All application materials must be submitted to the Graduate School by the deadlines given here. These dates apply to both on and off campus sites.

The admissions committee will review and evaluate the entire academic and professional record in making the admission decision. Consideration will be given to: (a) previous graduate GPA; (b) GRE or MAT scores; (c) three (3) letters of recommendation indicating probable success in the program from professional sources on official letterhead; (d) an acceptable work experience record (curriculum vita or resume); (e) an acceptable score on an interview; and (f) an acceptable score on a scholarly writing sample. The criteria listed above will be evaluated to determine the applicant's overall potential for success in the program as compared to other applicants in the admissions cycle. All criteria are weighted equally, and no one criteria will keep a student out of the program. There are no conditional admissions.

### Pre-K—12 Administration and Supervision Admission Deadlines (Ed.D.)

- Submit by July 1st for admission in the fall semester.\*\*
- Submit by April 1st for admission in the summer semester.\*\*

\*\*PLEASE NOTE: Effective Fall 2015, there will be a single admission deadline of February 1<sup>st</sup>, which will allow for admission to this program in the fall semester only.

### PRE-K – 12 ADMINISTRATION AND SUPERVISION CONCENTRATION

#### PROGRAM OF STUDY

##### Major Field Core (12 Semester hours)

EDAD 6000	Statistics (Prerequisite for EDAD 7180)	3
EDAD 7040	Leadership and Interpersonal Relationships	3
EDAD 7120	Advanced Methods of Educational Research	3
EDAD 7180	Statistical Analysis in Ed Leadership II	3

##### Concentration (36 Semester Hours)

EDCI 6300	Multicultural Education	3
EDCI 7000	Foundations of Education	3
EDCI 7450	Learning Theories for Educators	3
EDAD 7010	Theory and Principles of Educational Administration	3
EDAD 7070	Planning For Educational Change	3
EDAD 7150	Advanced Legal Problems	3
EDAD 7090	Seminar in Admin./Supervision	3
EDAD 7000	Interdepartmental Doctoral Seminar	3
EDAD 7030	Qualitative-Naturalistic and Survey Research	3

##### Choose one of the following three courses (3 hours)

EDAD 7020	Policy Implementation in Educational
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EDAD 7060	Administration Administration of Institutional Programs and Materials	3
EDAD 7200	Human Resource Administration	3

**Choose two of the following courses (6 hours)**

EDAD 7050	Professional Negotiations	3
EDAD 7280	Financial Mgmt. and Administration	3
EDAD 7300	Communication for School Executives	3

**Electives (6 Semester Hours)**

EDAD ****	Elective	3
EDAD ****	Elective	3

(NOTE: Consultation with your advisor is required in the selection of electives.)

**Dissertation (A minimum of 6 Semester Hours)**

EDAD 8100	Doctoral Dissertation	6-15
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**60 credit hours** are the minimum required for the Ed.D.  
(Please see your advisor before registering for courses.)

**Degree Requirements (PreK-12 Administration and Supervision)**

The doctoral degree in Administration and Supervision with a concentration in PreK-12 Administration is designed to offer students the experience of advanced study and research in their field of specialization. Study at the doctoral level requires a high level of motivation, dedication, and persistence by students who are committed to: (1) improving their personal and professional goals, and (2) advancing knowledge in their chosen field of study through independent and high quality dissertation research.

The degree requirements consist of the following:

1. A minimum of sixty (60) semester hours of approved course work beyond the Master's Degree is required;
2. Twelve (12) semester hours of general doctoral core;
2. Thirty-six (36) semester hours of courses within the major core;
3. Six (6) hours of electives; and
4. 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 and comprehensive examination and residency of a minimum of eighteen (18) semester hours over a period of four (4) semesters. All courses must be taken in order. Candidates must see their advisor prior to registering each semester.

Grades of "C" or lower cannot count toward the doctoral degree, nor does the grade of "C" or lower meet the eligibility requirements for the Comprehensive Examinations. Courses with a "C" or lower must be retaken for a higher grade. Students can only retake a course a maximum of two times. Students not successfully completing a course with a grade of "B" or better after the second attempt may be dismissed from the degree program.

**HIGHER EDUCATION ADMINISTRATION  
CONCENTRATION**

**PROGRAM OF STUDY**

**Major Field Core (12 Semester hours)**

EDAD 6000	Statistics (Prerequisite for EDAD 7180)	3
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EDAD 7040	Leadership and Interpersonal Relationships	3
EDAD 7120	Advanced Methods of Educational Research	3
EDAD 7180	Statistical Analysis in Ed. Leadership II	3

**Concentration (33 Semester Hours)**

EDAD 7380	Teaching Adult Education	3
EDAD 7400	Foundations of Higher Education	3
EDAD 7410	Diversity in Higher Education	3
EDAD 7450	Economics & Finance in Higher Education	3
EDAD 7150	Advanced Legal Problems	3
EDAD 6170	Organization & Administration in Higher Education	3
EDAD 7420	Curriculum, Faculty, Students in Higher Education	3
EDAD 7430	Seminar in Higher Education	3
EDAD 7440	Practicum in Higher Education I	1
EDAD 7441	Practicum in Higher Education II	1
EDAD 7442	Practicum in Higher Education III	1
AGSC 6510	Advanced Geospatial Information Systems (AGSC 6510 Prerequisite for EDAD 7499)	3
EDAD 7499	Marketing in Higher Education	3

**Electives (9 Semester Hours)**

EDAD ****	Elective	3
EDAD ****	Elective	3
EDAD ****	Elective	3

\*\*\*\*NOTE: Consultation with your advisor is required in the selection of electives.)

**Dissertation (6-15 Semester Hours)**

EDAD 8100	Doctoral Dissertation	6-15
Minimum Required hours for the Ed.D.:		<b>60</b>

(Please see your advisor before registering for courses.)

**Degree Requirements (Higher Education Administration)**

The doctoral degree in Educational Leadership with a concentration in Higher Education Administration is designed to offer students the experience of advanced study and research in their field of specialization. Study at the doctoral level requires a high level of motivation, dedication, and persistence by students who are committed to: (1) improving their personal and professional goals, and (2) advancing knowledge in their chosen field of study through independent and high quality dissertation research.

The degree requirements consist of the following:

1. A minimum of sixty (60) semester hours of approved course work beyond the Master's degree;
2. Twelve (12) semester hours in the doctoral core;
3. Thirty-three (33) semester hours in the major core;
4. Nine (9) semester hours of electives; and,
5. Six to fifteen (6-15) semester hours for the satisfactory completion of the doctoral dissertation.

Also required is the successful completion of a written qualifying and comprehensive examination and residency of a minimum of eighteen (18) semester hours over a period of four (4) semesters. All courses must be taken in order. Candidates must see their advisor prior to registering each semester.

Grades of "C" or lower cannot count toward the doctoral degree, nor does the grade of "C" or lower meet eligibility requirements for the Comprehensive Examinations. Courses with a "C" or lower must be retaken for a higher grade. Students can only retake a course a maximum of two times. Students not successfully completing a

course with a grade of “B” or better after the second attempt may be dismissed from the degree program.

## MAJOR: INSTRUCTIONAL LEADERSHIP

### DEGREE: EDUCATIONAL SPECIALIST (Ed.S.)

#### Concentrations:

##### Instructional Leadership with Licensure

##### Instructional Leadership without Licensure

#### Student Learning Outcomes

- Instructional Leadership for Continuous Improvement: An ethical and effective instructional leader facilitates professional practice that continually improves student learning.
- Culture for Teaching and Learning: An ethical and effective instructional leader collaborates with stakeholders to create and sustain an inclusive, respectful and safe environment conducive to learning and growth for all.
- Professional Learning and Growth: An ethical and effective instructional leader develops the capacity of all educators by designing, facilitating, and participating in collaborative learning informed by multiple sources of data.
- Resource Management: An ethical and effective instructional leader facilitates the development of a highly effective learning community through processes that enlist diverse stakeholders and resources.

#### General Admission Requirements

Admission to the program requires the applicant to have a master’s degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 3.25 or better on a 4.0 scale, and submission of an official report of the Graduate Record Examination (GRE) score or Millers Analogies Test (MAT) score is required for admission. All applicants must submit test scores at the time of application.

#### Additional Admission Requirements for the Ed.S. Licensure Concentration

In addition to the general admission requirements, consideration will be given to: (a) a letter of recommendation on official employment letterhead; (b) a minimum of three years of work experience in the schools; (c) an acceptable score on an interview; (d) an acceptable score on a writing sample; (e) an acceptable score on in-basket exercises to be scheduled through the department; (f) and a teacher license. A Portfolio is required as part of the admissions process. The department will send the instructions for the portfolio upon receipt of your application in the department. The criteria listed above will be evaluated to determine the applicant’s overall potential for success in the program as compared to other applicants in the admissions cycle. There are no conditional admissions.

Each student must be interviewed by a committee of professional administrators prior to admission to the program. The admissions committee will review and evaluate the entire academic and professional record in making the admission decision. Each student must inform his or her advisor early in the program that Principal/Supervisor licensure is being sought. All candidates must complete and successfully defend a required Action Research Project. All application materials must be submitted to the Graduate School by the deadlines below:

Submit by July 1<sup>st</sup> for Fall Admission  
Submit by November 1<sup>st</sup> for Spring Admission\*  
Submit by April 1<sup>st</sup> for Summer Admission\*

*\*For licensure programs admission is available in the spring and summer only.*

#### Transfer Credits

Candidates wishing to transfer credit(s) toward the Ed.S. program may transfer a maximum of six (6) relevant graduate credit hours from an accredited institution for courses that correspond to program/state requirements. All transfer courses must be reviewed and approved by both the academic advisor and the department chair.

Candidates in the Educational Specialist program must establish academic residency by completing a minimum of eighteen (18) hours over a period of four (4) academic year semester or two (2) academic year semesters and two (2) summer registrations (2 sessions per one summer equals one registration) of courses in the EDAD department.

## INSTRUCTIONAL LEADERSHIP WITH LICENSURE CONCENTRATION

### PROGRAM OF STUDY

#### General Education Core- 15 Hours

EDAD 6010	Theory and Principles of Educational Administration	3
EDAD 6060	Administration of Instructional Programs	3
EDAD 6070	Legal Personnel Problems	3
EDAD 6300	Communication Skills for School Executives	3
EDAD 6110	Human Resource Management	3

#### Major Concentration – 18 hours

EDAD 6580	Action Research	3
EDAD 6120	Assessment for Professional Licensure	3
EDAD 6200	School Principalship K-12	3
EDAD 6280	Financial Management & Administration	3
EDAD 6515	Administrative Internship I	1
EDAD 6516	Administrative Internship II (EDAD 6515 Prerequisite for EDAD 6516)	1
EDAD 6517	Administrative Internship III (EDAD 6515 & 6516 Prerequisite for EDAD 6517)	1
EDAD 6100	Curriculum Planning and Programs	3

**Total Degree Requirement 33**

#### (Please see your advisor before registering for courses.) Degree Requirements for Ed.S. Licensure Candidates

Candidates for the Ed.S. degree must take a minimum of 33 hours of course work, pass the comprehensive examinations in the field of general education and educational administration/leadership, and pass the School Leaders Licensure Assessment (SLLA). The program of study must be completed after nine (9) hours or coursework. Grades of “C” or lower cannot count toward the degree. Students can only retake a course a maximum of two times. Students not successfully completing a course with a grade of “B” or better after the second attempt may be dismissed from the degree program.

All candidates must meet with their advisor prior to registration each semester. Courses must be taken in order as determined by program requirements. All students must complete a Comprehensive Examination Application one semester prior to their intended examination date. All applications must be approved by academic advisor and the department chair. All examination dates can be located on the Graduate School Academic Calendar.

## **INSTRUCTIONAL LEADERSHIP WITHOUT LICENSURE CONCENTRATION**

### **PROGRAM OF STUDY**

#### **General Education Core- 15 Hours**

EDAD 6010	Theory and Principles of Educational Administration	3
EDAD 6060	Administration of Instructional Programs	3
EDAD 6070	Legal Personnel Problems	3
EDAD 6300	Communication Skills for School Executives	3
EDAD 6110	Human Resource Management	3

#### **Major Concentration – 18 hours**

##### **Students must take 18 hours from the following:**

EDAD 6050	Professional Negotiations	3
EDAD 6140	Culminating Project for Ed.S. (taken last enrolled semester in program)	3
EDAD 6000	Advanced Educational Statistics	3
EDAD 6040	Leadership & Interpersonal Relations for Administrators	3
EDAD 6250	International Global	3
EDAD 6080	Internship in Administration and Supervision	3
EDCI 6100	Curriculum Planning and Programs	3
EDAD 6580	Action Research	3

**Total Degree Requirement 33**

**(Please see your advisor before registering for courses.)**

### **Degree Requirements for Ed.S. Non-Licensure Candidates**

Candidates for the Ed.S. degree must take a minimum of 33 hours of course work, pass the comprehensive examinations in the field of general education and educational administration, and complete a culminating project (EDAD 6140). The program of study must be completed after nine (9) hours of coursework. Grades of “C” or lower cannot count toward the degree. Students can only retake a course a maximum of two times. Students not successfully completing a course with a grade of “B” or better after the second attempt may be dismissed from the degree program.

All candidates must meet with their advisor prior to registration each semester. Courses must be taken in order as determined by program requirements. All students must complete a Comprehensive Examination Application one semester prior to their intended examination date. All applications must be approved by your academic advisor. All examination dates can be located on the Graduate School Academic Calendar.

**MAJOR: INSTRUCTIONAL LEADERSHIP  
DEGREE: MASTER OF EDUCATION (M.Ed.)  
Concentrations: Instructional Leadership with Licensure  
Instructional Leadership without Licensure  
Career and Technical Education (CTE)**

### **Student Learning Outcomes**

- **Instructional Leadership for Continuous Improvement:** An ethical and effective instructional leader facilitates professional practice that continually improves student learning.
- **Culture for Teaching and Learning:** An ethical and effective instructional leader collaborates with stakeholders to create and sustain an inclusive, respectful and safe environment conducive to learning and growth for all.
- **Professional Learning and Growth:** An ethical and effective instructional leader develops the capacity of all educators by designing, facilitating, and participating in collaborative learning informed by multiple sources of data.
- **Resource Management:** An ethical and effective instructional leader facilitates the development of a highly effective learning community through processes that enlist diverse stakeholders and resources.

### **Admission Requirements**

Admission to the program requires the applicant to have a bachelor’s degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.75 or better on a 4.0 scale, and submission of an official report of the Graduate Record Examination (GRE) score or Millers Analogies Test (MAT) score is required for admission. All applicants must submit test scores at the time of application.

Applicants for the Non-licensure or Career and Technical Education Concentrations may be considered for conditional admission with a lower grade point average or MAT/GRE score. Non-licensure applicants whose grade point averages or standardized test scores are below those normally expected for admission, which may result in their admission being denied, may be given further consideration for admission to the M.Ed. program if the student provides the following: (a) an acceptable work record (a resume or curriculum vita), (b) three written recommendations indicating probable success in the program, and (c) a writing sample that will be scheduled through the department.

The student must remove conditional status in the first nine hours of graduate courses; failure to do so will result in dismissal from the program. There is no conditional admission for licensure candidates.

### **Additional Admission Requirements for the M.Ed. Licensure Concentration**

In addition to the general admission requirements, consideration will be given to: (a) a letter of recommendation on official employment letterhead; (b) a minimum of three years of work experience in the schools; (c) an acceptable score on an interview; (d) an acceptable score on a writing sample; (e) an acceptable score on in-basket exercises to be scheduled through the department; and (f) a teacher license. A Portfolio is required as part of the admissions process. The department will send the instructions for the portfolio upon receipt of your application in the department. The criteria listed above will be evaluated to determine the applicant’s overall potential for success in the program as compared to other applicants in the admissions cycle. There are no conditional admissions.

Each student must be interviewed by a committee of professional administrators prior to admission to the program. The admissions committee will review and evaluate the entire academic and professional record in making the admission decision. Each student must inform his or her advisor early in the program that Principal/Supervisor licensure is being sought. All candidates must complete and successfully defend a required Action Research Project.

All application materials must be submitted to the Graduate School by the deadlines below:

- **Submit by July 1<sup>st</sup> for Fall Admission**
- **Submit by November 1<sup>st</sup> for Spring Admission\***
- **Submit by April 1<sup>st</sup> for Summer Admission\***

*\*For licensure programs there is admission in the spring and summer only.*

### Transfer Credits

Candidates wishing to transfer credit(s) toward the M.Ed. program may transfer a maximum of twelve (12) relevant graduate credit hours from an accredited institution for courses that correspond to program/state requirements. All courses must be reviewed and approved by your academic advisor and the department chair.

### M.ED. INSTRUCTIONAL LEADERSHIP WITH LICENSURE CONCENTRATION

#### PROGRAM OF STUDY

##### Major Field Core (15 Semester hours)

EDAD 5020	Philosophy & Introduction to Ed. Adm.	3
EDAD 5030	Instructional Leadership	3
EDAD 5200	Human Resource Management	3
EDAD 5640	School and Community Relations	3
EDAD 5050	Educational Law	3

##### Concentration (18 Semester Hours)

EDAD 5515	Administrative Internship I	1
EDAD 5516	Administrative Internship II (EDAD 5515 Prerequisite for EDAD 5516)	1
EDAD 5080	Action Research for Educators	3
EDAD 5090	Assessment for Leaders	3
EDAD 5720	School Finance	3
EDAD 5517	Administrative Internship III (EDAD 5515 & 5516 Prereq. EDAD 5517)	1
EDCI 6100	Curriculum Planning and Programs	3
EDAD 6200	Organ/Admin of Secondary Schools	3

**Total degree requirement:**  
(Please see your advisor before registering for courses.)

#### Degree Requirements for M.Ed. Licensure Candidates

Candidates for the M.Ed. degree must take a minimum of 33 hours of course work, pass the comprehensive examinations, and pass the School Leaders Licensure Assessment (SLLA). The program of study must be completed after nine (9) hours of coursework. Grades of "C" or lower cannot count toward the degree. All candidates must meet with their advisor prior to registration each semester. Courses must be taken in order as determined by program requirements. All students must complete a Comprehensive Examination Application one semester prior to their intended examination date. All applications must be approved by your academic advisor. All examination dates can be located on the Graduate School Academic Calendar.

### M.ED. INSTRUCTIONAL LEADERSHIP WITHOUT LICENSURE CONCENTRATION

#### PROGRAM OF STUDY

This curriculum is for those who do not intend to apply to the State of Tennessee for a principal license.

### General Education Core- 15 Hours

EDAD 5020	Philosophy & Introduction to Educational Administration	3
EDAD 5030	Instructional Leadership	3
EDAD 5200	Human Resource Management	3
EDAD 5640	School and Community Relations	3
EDAD 5050	Educational Law	3

#### Major Concentration – 12 hours

EDAD 5110	Educational Research for Practitioners	3
EDAD 5180	Principles and Techniques for Teaching Adults	3
EDAD 5420	Communication Organization	3
EDAD 5720	School Finance	3
Electives		6

**Total Degree Requirement:** **33**  
(Please see your advisor before registering for courses.)

#### Degree Requirements for M.Ed. Instructional Leadership Non-Licensure Candidates

Candidates for the M.Ed. degree must take a minimum of 33 hours of course work and pass the comprehensive examinations in the field of general education and educational administration. The program of study must be completed after nine (9) hours of coursework. Grades of "C" or lower cannot count toward the degree. All candidates must meet with their advisor prior to registration each semester. Courses must be taken in order as determined by program requirements. All students must complete a Comprehensive Examination Application one semester prior to their intended examination date. All applications must be approved by your academic advisor. All examination dates can be located on the Graduate School Academic Calendar.

### M.ED. CAREER AND TECHNICAL EDUCATION CONCENTRATION (CTE)

#### PROGRAM OF STUDY

##### Major Field Core (15 Semester hours)

EDAD 5020	Philosophy and Introduction to Educational Administration	3
EDAD 5030	Instructional Leadership	3
EDAD 5200	Human Resource Management	3
EDAD 5640	School and Community Relations	3
EDAD 5050	Educational Law	3

##### Concentration (18 Semester Hours)

TELC* 5001 R50	Adolescent Development	3
TELC* 5003 R50	Managing the Learning Environment	3
TELC* 5004 R50	Survey of Exceptional Children	3
TELC* 5005 R50	Teaching and Learning with Technology	3
TELC* 5006 R50	Teachers as Agents of Change	3
*TELC stands for Teacher Education License C.		
EDAD 5090	Assessment for Leaders	3

**Total Degree Requirement** **33**

(Please see your advisor before registering for courses.)

\*\*\*This entire degree program is offered online.

#### Degree Requirements for M.Ed. Career and Technical Education (CTE)

Candidates for the M.Ed. degree must take a minimum of 33 hours of course work and pass the comprehensive examinations. The program of study must be completed after nine (9) hours of coursework. Grades of “C” or lower cannot count toward the degree. All candidates must meet with their advisor prior to registration each semester. Courses must be taken in order as determined by program requirements. All applications must be approved by your academic advisor. All examination dates can be located on the Graduate School Academic Calendar.

## COURSE DESCRIPTIONS

### EDUCATIONAL ADMINISTRATION

**EDAD 5020. PHILOSOPHY AND INTRODUCTION TO SCHOOL ADMINISTRATION. (3)** A general course designed to develop insight into the philosophy, history, and organization of schools. **Prerequisites:** admission to M.Ed. program.

**EDAD 5030. INSTRUCTIONAL LEADERSHIP. (3)** Designed to develop understanding of basic theories of supervision and supervisory procedures for improving instructional services. **Prerequisites:** admission to M.Ed. program.

**EDAD 5040. THE ADULT LEARNER. (3)** This course is designed to (a) investigate the various problems related to adult learning; (b) enable students to acquire an understanding of different learning patterns of adults; (c) identify similarities and differences compared with the learning of youth; (d) understand how adult educators, through research and practice, are approaching solutions for these problems, and (e) understand how adult education programs are designed to serve the differentiated needs and uniqueness demanded by the adult learning situation.

**EDAD 5050. EDUCATIONAL LAW. (3)** A study of legal principles that relate to such matters as authority, responsibility, and liability of school boards, districts, and state and federal organizations. The legal and ethical status of principals and teachers is also considered. **Prerequisites:** EDAD 5020, 5030, 5515, 5200, 5640, and 5516. Taken concurrently with EDAD 5090 and EDAD 5080.

**EDAD 5070. STRESS MANAGEMENT FOR ADMINISTRATORS. (3)** Management of today’s schools results in increased stress upon educational leaders. Vital to successful teaching and administering is a knowledge of techniques for stress management.

**EDAD 5080. ACTION RESEARCH FOR EDUCATORS.** This course provides educational leaders with a set of tools for engaging with significant problems in schools. Students will experience (a) collecting information, (b) conducting a diligent literature search and review, (c) reflecting critically, (d) making decisions and inquiring collaboratively, (e) investigating and data-analysis, (f) participating in interpretation, and (g) drawing conclusions, thus providing meaningful recommendations to stakeholders and equipping these leaders to “take action.” Action research may be engaged as a developmental process that systematically increases the scope of the investigation. The state required Capstone Action Research Project will be presented at the conclusion of this course. **Prerequisites:** EDAD 5020, 5030, 5515, 5200, 5640, and 5516. Taken concurrently with EDAD 5090 and EDAD 5050.

**EDAD 5090. ASSESSMENT FOR LEADERS.** The assessment for educational leaders course is designed to help instructional leaders develop: acumen on assessment; an understanding of how students’ test scores should factor into making decisions that affect students and teachers; and the effects of federal legislation as a dominant force on assessment-based accountability. To be taken concurrently with EDAD 5080 and EDAD 5050. **Prerequisites:** EDAD 5020, 5030, 5515, 5200, 5640, and 5516.

**EDAD 5110. EDUCATIONAL RESEARCH FOR THE PRACTITIONER. (3)** A course designed to introduce the student to different methods for conducting educational research. The course emphasizes methodology, analysis, and interpretation of data. Also, technology as it applies to school administration is emphasized.

**EDAD 5180. PRINCIPLES AND TECHNIQUES FOR TEACHING ADULTS. (3)** This course is designed to provide a sound background from

research data about the principles, methodology and instructional competencies which underlie the areas referred to as Adult Education. These areas include: (a) teaching basic skills to adults; (b) teaching adults to develop new insights, attitudes, skills and habits; (c) teaching adults to develop new skills and habits for utilizing leisure—voluntary and force; (d) teaching the adult to develop positive attitudes toward an acceptance of aging, illnesses and death; and (e) teaching adult citizens skills of thinking and learning, group dynamics and functional democracy.

**EDAD 5200. HUMAN RESOURCE MANAGEMENT.** This course is a study of human resources development practices in school systems, with emphasis on central office and school unit responsibilities for attracting, selecting, developing, evaluating, and retaining competent faculty and staff. **Prerequisites:** for master’s students: EDAD 5020, 5030, 5515. To be taken concurrently with EDAD 5640 and EDAD 5516.

**EDAD 5350. PARENTAL INVOLVEMENT EDUCATION. (3)** This course is designed for those educators who deal with parental involvement in education.

**EDAD 5390. COMMUNITY RESOURCES. (3)** This course is a study of the relationships between schools and communities. This course may be used for EDAD 5640.

**EDAD 5420. COMMUNITY ORGANIZATION. (3)** This course is designed to introduce the principles and practices of community organization with emphasis on urban communities. This course may be substituted for EDAD 5640.

**EDAD 5490. ASPECTS OF AGING. (3)** Chief concern is with providing a basic understanding of the biological and psychological aspects of aging. Current theories of aging are also examined.

**EDAD 5515/6515. ADMINISTRATIVE INTERNSHIP I. (1)** The first section of a systematic study and analysis of the work of a principal or supervisor in a given school situation through seminar and field experiences. The student will learn how to develop and prepare a portfolio for licensure and employment purposes. This course should be taken in the first semester of enrollment for students seeking administrative licensure. Students enrolling in EDAD 5515/6515 must be concurrently taking EDAD 5020/6010 and EDAD 5030/6060 in the first semester.

**EDAD 5516/6516. ADMINISTRATIVE INTERNSHIP II. (1)** The second section of a systematic study and analysis of the work of a principal or supervisor in a given school situation through seminar and field experiences. The student will continue to prepare his/her professional portfolio and it will be evaluated in this course. This course should be taken in the second semester of enrollment for students seeking administrative licensure. Students enrolling in EDAD 5516/6516 must be concurrently taking EDAD 5200/6110 and EDAD 5640/6300 in the second semester. **Prerequisites for students enrolling in EDAD 6516:** EDAD 5020/6010, 5030/ 6060, 5515/6515.

**EDAD 5517/6517. ADMINISTRATIVE INTERNSHIP III. (1)** The third section of a systematic study and analysis of the work of a principal or supervisor in a given school situation through seminar and field experiences. The student will complete the professional portfolio. A final evaluation of the portfolio will take place. This course should be taken in the third semester of enrollment for students seeking administrative licensure. **Prerequisites for students enrolling in EDAD5517:** EDAD 5020, 5030, 5515, 6160, 5080, 5200, 6100, 5516, 5050, and 5640; must be taken concurrently with EDAD 5720 and 6090 in last semester of program studies. **Prerequisites for students enrolling in EDAD 6517:** EDAD 6010, 6050, 5615, 6120, 6580, 6110, 6516, 6070, 6300, and EDCI 6100; must be taken concurrently with EDAD 6280 and 6160 or 6200 in last semester of program studies.

**EDAD 5640. SCHOOL AND COMMUNITY RELATIONS. (3)** Explores the purpose and function of politics and community interactions at the local, state, and national levels as they affect public education. This is a school-community relationship course. (Formerly EDAD 564). **Prerequisites:** EDAD 5020, 5030, 5515. To be taken concurrently with EDAD 5200 and EDAD 5516.

**EDAD 5720. SCHOOL FINANCE. (3)** A consideration of the financial support of elementary and secondary education, involving sources of income, methods of finance, and expenditures. The school finance problems of the local administrator are given special attention. **Prerequisites:** EDAD 5020, 5030, 5515, 5080, 5200, 5516, 5050, 5080, 5090, and EDCI 6100. To be taken concurrently with EDAD 6160/6200 and EDAD 5517.

**EDAD 5910, 5920, 5930. PROBLEMS AND PROJECTS IN EDUCATION.** (3) These are individual study courses and require special permission to sign up.

**EDAD 6000. STATISTICAL ANALYSIS IN EDUCATIONAL LEADERSHIP I.** (3) This course offers training in the use of statistical tools for use in research and in understanding scientific literature. Emphasis is on inferential statistics. Prerequisite: Elementary statistics, e.g., as covered in **EDAD 5110**. Must be taken in first semester of Ed.D. program.

**EDAD 6010/7010. THEORY AND PRINCIPLES OF EDUCATIONAL ADMINISTRATION.** (3) A study of current theory and principles of educational administration. Prerequisites: For the Ed.D. PreK-12 program, candidates must successfully complete **EDAD 6000, 7040, 7120, and 7180 prior to taking 7010**. Taken in the first semester of the Ed.S. Licensure program and concurrently with EDAD 6060 and 6515.

**EDAD 6040/7040. 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. Prerequisites: For the Ed.D. PreK-12 program, candidates must take 7040 in the first semester of the program. To be taken in the fourth semester of the higher education concentration, concurrently with EDAD 7441 and AGSC 6510. Taken in the first semester of the Ed.S. licensure program.

**EDAD 6050/7050. 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. Taken in the fourth semester of the Ed.S. licensure program.

**EDAD 6060/7060. 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. Taken in the first semester of the Ed.S. Licensure program and concurrently with EDAD 6010 and 6515.

**EDAD 6070. LEGAL PROBLEMS.** (3) Studies the legal facets of personnel administration in schools. Taken in the third semester of the Ed.S. Licensure program and taken concurrently with EDAD 6580 and EDAD 6120.

**EDAD 6080/7080. 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. **Prerequisites for Ed.D. PreK-12 candidates: EDAD 6000, 7040, 7120, 7180, 7010, 7150, EDCI 7000, 6300, and 7450.** Candidates in the Ed.S. and Ed.D. program will take 6080/7080; taken in the final semester.

**EDAD 6090. PLANNING FOR EDUCATIONAL FACILITIES.** (3) Emphasizes trends in planning, designing, constructing, modernizing, and utilizing educational facilities. To be taken in the seventh semester of the higher education concentration, concurrently with an EDAD elective.

**EDAD 6100. COMPUTER APPLICATIONS FOR EDUCATIONAL LEADERS.** (3) The course is designed to provide administrators, supervisors, and teachers with a basic understanding of the potential uses of the computer in administration.

**EDAD 6110. HUMAN RESOURCE MANAGEMENT AND DEVELOPMENT.** (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. Taken in the second semester of the Ed.S. licensure program and taken concurrently with EDAD 6300 and EDAD 6516.

**EDAD 6120. ASSESSMENT FOR PROFESSIONAL LICENSURE.** (3-6) This course is for those seeking Instructional Leadership licensure at the Ed.S. level. The requirement for this course will be met by working with a practicing administrator in an on-site school situation for one semester. Taken in the third semester of the Ed.S. licensure program and taken concurrently with EDAD 6580 and EDAD 6070.

**EDAD 6140. CULMINATING PROJECT FOR Ed.S.** (3) In this course

students produce a written research project on a topic related to educational administration.

**EDAD 6150. ETHICS FOR SCHOOL ADMINISTRATORS.** (3) A general course to explore the ethical implications of being a school leader and administrator.

**EDAD 6160. SCHOOL PRINCIPALSHIP.** (3) Designed for administrators and teachers who desire to study purposes, practices, and trends in elementary school administration. Prerequisites: This course is taken in the last semester of the program for Master's candidates; it is taken concurrently with EDAD 5720 and EDAD 5517. This course is taken in the last (semester 5) of the M. Ed. and Ed.S. licensure program. All other courses in the program must be successfully completed prior to registering for this course.

**EDAD 6170. ORGANIZATION AND ADMINISTRATION OF HIGHER EDUCATION.** (3) This course is designed to study patterns of organization and governance with an emphasis on basic management principles associated with the administration of institutions of higher education. **To be taken in the third semester of the program concurrently with EDAD 5180 and EDAD 7420.**

**EDAD 6200. ORGANIZATION AND ADMINISTRATION OF THE SECONDARY SCHOOL.** (3) This course is designed to assist students in acquiring and/or increasing their knowledge concerning the many facets of the principal's role in the secondary schools. The course will emphasize the findings of research pertaining to the building of effective schools and how this research can be implemented by principals to improve the quality of schools. This course is taken in the last (semester 5) of the M.Ed. and Ed.S. licensure program. All other courses in the program must be successfully completed prior to registering for this course. It is taken concurrently with EDAD 5720/6280 and EDAD 5517/6517.

**EDAD 6250. INTERNATIONAL GLOBAL EDUCATION.** (3) This course compares and contrasts the philosophy, course content, methodology and management styles of school systems of various countries.

**EDAD 6300/7300. 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. Taken in the second semester of the Ed.S. licensure program and concurrently with EDAD 6110 and EDAD 6516.

**EDAD 6580. ACTION RESEARCH FOR EDUCATORS.** (3) This course provides educational leaders with a set of tools for engaging with significant problems in schools. Students will experience (1) collecting information, (b) conducting a diligent literature search and review, (c) reflecting critically, (d) making decisions and inquiring collaboratively, (e) investigating and data-analysis, (f) participating in interpretation, and (g) drawing conclusions, thus providing meaningful recommendations to stakeholders and equipping these leaders to "take action." Action research may be engaged as a developmental process that systematically increases the scope of the investigation. Taken in the third semester of the Ed.S. Licensure program and concurrently with EDAD 6070 and EDAD 6120.

**EDAD 6910/7910. INDEPENDENT RESEARCH IN LEADERSHIP.** (3) This is an independent study course and require special permission to sign up.

**EDAD 7000. INTERDEPARTMENTAL DOCTORAL SEMINAR.** (3) This course is designed to assist doctoral students in writing the dissertation proposal.

**EDAD 7020. POLICY IMPLEMENTATION IN EDUCATIONAL ADMINISTRATION.** (3) A course to prepare students to develop and implement administrative policy in education at the local, state, and national levels. Forces which shape the thinking of policymaking bodies are emphasized. Also, the considerations necessary for effective formulations and implementations of policy in educational administration and supervision are analyzed.

**EDAD 7030. QUALITATIVE-NATURALISTIC AND SURVEY RESEARCH METHODS.** (3) This course emphasizes the methodology involved in the development and implementation of naturalistic methods of research.

**EDAD 7070. PLANNING FOR EDUCATIONAL CHANGE. (3)** This course includes strategic and operational planning, utilization of human resources, organizational development, financial resources, and the budgetary process in planning. Stress and change in education, and possible scenarios for the educational future are also covered. **Prerequisites: For candidates in the Ed.D. PreK-12 program, EDAD 6000, 7040, 7120, 7180, 7010, 7150, 7080, 7090 and EDCI 7000, 6300, and 7450.**

**EDAD 7090. SEMINAR IN EDUCATION ADMINISTRATION AND SUPERVISION. (3)** A series of activities designed to integrate learning. Prerequisites: Nine semester hours in Administration and Supervision and admission to Ed.D. Program. This course is taken near the end of the program. Prerequisites: For candidates in the Ed.D. PreK-12 program, **EDAD 6000, 7040, 7120, 7180, 7010, 7150, 7080, and EDCI 7000, 6300, and 7450.**

**EDAD 7100. CURRENT ISSUES IN EDUCATIONAL ADMINISTRATION (3)** A course designed to insure that students are familiar with issues and trends in school administration and able to understand and evaluate the potential use and application of those which are appropriate.

**EDAD 7110. SCHOOL DISTRICT ADMINISTRATION. (3)** This course focuses on readings, discussion and problem solving in areas of school administration that primarily concern the board of education, the superintendent of schools, and the central office.

**EDAD 7120. ADVANCED METHODS OF RESEARCH. (3)** A course designed to teach methods of educational research. **Prerequisites: EDAD 6000 and 7010 for PK-12; to be taken in second semester with EDAD 7180 and EDAD 7440 for higher education concentration.**

**EDAD 7130/6130. THE COMMUNITY JUNIOR COLLEGE. (3)** This course is designed to give the student an overview of both the administration and curriculum of the community college.

**EDAD 7150. ADVANCED LEGAL PROBLEMS. (3)** Involves the study of legal problems encountered by school administrators. Methods of conducting legal research are employed. Prerequisites: Nine semester hours in Administration and Supervision. Prerequisites: For candidates in the Ed.D. PreK-12 program, EDAD 6000, 7040, 7120, 7180, and 7010. Students in Higher Education will register for the Higher Education Law section of this course during the fifth semester of the program, concurrently with EDAD 7499 and an EDAD elective.

**EDAD 7180. STATISTICAL ANALYSIS IN EDUCATIONAL LEADERSHIP II. (3)** This course emphasizes the use of computers in education, especially educational administration. The focus is the use of statistical analysis packages and the application of computers to research and educational problems. Prerequisite: EDAD 6000 or equivalent. Prerequisites: EDAD 6000 and 7010 for PK-12; to be taken in the second semester with EDAD 7120 and EDAD 7440 for higher education.

**EDAD 7200. HUMAN RESOURCE ADMINISTRATION. (3)** Emphasis is placed upon personnel policies and practices in schools and communities. Consideration is given to pupil-teacher, teacher-principal, principal-staff problems, and the interrelationships of these persons to each other and the community.

**EDAD 7280/6280. FINANCIAL MANAGEMENT AND ADMINISTRATION. (3)** This course is primarily concerned with fiscal management at the central office level, emphasizing the responsibilities of the director and the business manager. Logistical support services, especially transportation, the lunch program, maintenance, and operations will also be included. Taken in the last semester of the Ed.S. licensure program (semester 5) and concurrently with EDAD 6200 and EDAD 6517.

**EDAD 7350. DECISION MAKING FOR ADMINISTRATORS. (3)** This course emphasizes the analytical approach to decision making for school administrators.

**EDAD 7380. TEACHING ADULT EDUCATION. (3)** This course is designed to provide a sound background from research data about the principles, methodology and instructional competencies which underlie the areas referred to as Adult Education. These areas include: (a) teaching basic skills to adults; (b) teaching adults to develop new insights, attitudes, skills and habits; (c) teaching adults to develop new skills and habits for utilizing leisure—voluntary and force; (d) teaching the adult to develop positive attitudes toward an acceptance of aging, illnesses and death; and (e) teaching adult citizens skills of thinking and learning, group dynamics and functional

democracy. To be taken in the third semester for higher education concentration concurrently with EDAD 6170 and EDAD 7420.

**EDAD 7400. FOUNDATIONS OF HIGHER EDUCATION. (3)** This course serves as an introduction to the historical, sociological, philosophical, and cultural foundations of higher education. Theoretical and methodological perspectives on inquiry in higher education as both a field of study and an arena for professional practice will also be explored. To be taken in the first semester of the program.

**EDAD 7410. DIVERSITY AND HIGHER EDUCATION. (3)** Diversity and Higher Education examines issues of diversity in colleges and universities from varied perspectives, including institutional; pedagogical; methodological; gender, race/ethnicity and class; and policy. To be taken in the first semester of the program.

**EDAD 7420. CURRICULUM, STUDENTS, AND FACULTY IN HIGHER EDUCATION. (3)** Curriculum, Students, and Faculty in Higher Education examines the nature and characteristics of resources including the American college student, the professional, the curriculum as well as the 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. To be taken in the third semester concurrently with EDAD 5180 and EDAD 6170.

**EDAD 7430. SEMINAR IN HIGHER EDUCATION. (3)** Seminar in Higher Education focuses on advanced understanding of scholarship and professional practice in the field of higher education. Students review literature and develop text and presentations based on their inquiries of the literature. All other required courses with a higher education focus are prerequisites as well as approval of the instructor. To be taken in the sixth semester of the program, concurrently with **EDAD 7550 and EDAD 7442.**

**EDAD 7440. PRACTICUM IN HIGHER EDUCATION.(1)** This course requires the candidate to complete a supervised professional practice within a selected higher education administrative area for each one (1) hour of academic credit. Candidates will meet for one (1) hour per week in a formal class setting with the course professor. Candidates will also be required to read a variety of supplemental articles, participate in class discussions on related issues arising from the work experience, and maintain a written log documenting the degree to which instructional objectives were targeted and met. **Prerequisite: Completion of EDAD 6000, 7400, 7410, 7180, and 7040.**

**EDAD 7441. PRACTICUM IN HIGHER EDUCATION II.(1)** – This course requires the candidate to complete an approved supervised professional practice within a selected higher education administrative area for each one (1) hour of academic credit. Candidates will meet for one (1) hour per week in a formal class setting with the course professor. Candidates will also be required to read a variety of supplemental articles, participate in class discussions on related issues arising from the work experience, and maintain a written log documenting the degree to which instructional objectives were targeted and met. **Prerequisite: Completion of EDAD 6000, 7400, 7410, 7180, 7040, 7440, 6420, 5180, 6170, 7120, and concurrently with EDAD 7040 and AGSC 6510.**

**EDAD 7442. PRACTICUM IN HIGHER EDUCATION III (1)** This course requires the candidate to complete an approved supervised professional practice within a selected higher education administrative area for each one (1) hour of academic credit. Candidates will meet for one (1) hour per week in a formal class setting with the course professor. Candidates will also be required to read a variety of supplemental articles, participate in class discussions on related issues arising from the work experience, and maintain a written log documenting the degree to which instructional objectives were targeted and met. Prerequisite: Completion of all coursework leading to the Comprehensive Exam and final semester of coursework. To be taken in the sixth semester of the program, concurrently with EDAD 7450 and EDAD 7430.

**EDAD 7450. ECONOMICS AND FINANCE OF HIGHER EDUCATION. (3)** Economics and Finance of Higher Education examines the economic context and fiscal management of higher education. To be taken in

the sixth semester of the program, concurrently with EDAD 7430 and EDAD 7442.

**EDAD 7460. GOVERNMENT, PUBLIC POLICY, AND HIGHER EDUCATION. (3)** This course focuses on the nature of relationships of government and public policy to post-secondary education. Issues of government relations and policy formulation and implementation as they relate to higher education are explored.

**EDAD 7470. CONTEMPORARY TOPICS IN HIGHER EDUCATION. (3-9)** Contemporary Topics in Higher Education focuses on issues and topics of current relevance in higher education. Topics vary and reflect what is of current and recurrent importance in the field of higher education.

**EDAD 7499. MARKETING IN HIGHER EDUCATION. (3)** This course emphasizes the theory and practice of marketing applied to the post-secondary education enterprise with particular attention focused on data acquisition and analysis, strategic planning, and development of programs for candidate recruitment and promotion at the institution, college, department, and programmatic levels. To be taken in the fifth semester of the higher education concentration, concurrently with EDAD 7150 and an EDAD elective.

**EDAD 8100. DOCTORAL DISSERTATION. (6-15)** Successful completion of a doctoral dissertation is required of all doctoral candidates. A minimum of six (6) hours is required for graduation, however, students must enroll in dissertation credits for a consecutive minimum of two semesters. This is a variable credit course in which students may take 3 or 6 credit hours per semester. Students must pay the full fee for 15 semester hours; a reduced fee becomes effective after enrolling for 15 semester hours, at this time students enroll in section 35.

**EDAD 8110. READINGS AND RESEARCH IN EDUCATIONAL ADMINISTRATION. (3-6)** This course is designed as a special readings course. A maximum of 6 hours may be used for the degree. Students must have completed all course work and be ready for EDAD 8100. The class prepares students for their Proposal Hearing. Prerequisite: Successful completion of the Comprehensive Examination.

**TELC 5001. ADOLESCENT DEVELOPMENT. (3)** This course focuses on psychological theories related to adolescent cognitive, social and physical development. A better understanding of the changes adolescents are facing will help educators plan and implement appropriate lessons, activities, lectures, assignments, and teaching strategies. Issues relevant to intellectual development, socialization, and educational evaluation are examined. Teacher variables and student variables in the instructional process are explored. Students can apply their knowledge in a variety of settings with a multicultural perspective.

**TELC 5003. MANAGING THE LEARNING ENVIRONMENT. (3)** This course focuses on the use of appropriate knowledge and skills for managing the total learning environment in secondary school settings with an emphasis on development of skills that facilitate effective teaching through appropriate management of techniques, including the involvement of parents and community members. Content modules and highly interactive discussion boards provide learning opportunities in an on-line setting.

**TELC 5004. SURVEY OF EXCEPTIONAL CHILDREN. (3)** This course provides a critical study of the history, issues, trends, and supporting research in special education. This course will enable the student to identify psychological, physical, educational, medical, behavioral and learning characteristics and needs of individuals with various disabilities, as well as students from diverse cultural, social, ethnic and racial backgrounds. Inclusion of students with disabilities, and techniques to adapt instruction to fit individual needs will be emphasized. An understanding of legislation, regulations, and litigation related to serving individuals with disabilities will enable the student to correlate individualized educational programs with the principles of normalization and least restrictive environments. Further, this course assists students in acquiring the knowledge and skills needed to function well as an educator in a changing and diverse society; an understanding of learners and learning processes; a knowledge of professional, ethical, and legal issues affecting educators; and the human relations skills needed to work effectively with individuals with disabilities and their families in both professional and community roles.

**TELC 5005. TEACHING AND LEARNING WITH TECHNOLOGY. (3)** This course will address the "Tennessee Statement of Education Teacher

Licensure Standards for Professional Education." All teacher candidates must complete studies in professional education. Professional education is a lifelong undertaking that is initiated in college course work, refined in field experiences, and enhanced during professional practice. The course work and related field and laboratory experiences enable the teacher candidate to meet the following performance standards in teaching all students including students at risk, students with disabilities, English language learners, economically disadvantaged students, highly mobile students, intellectually gifted students, and students from different racial and ethnic backgrounds.

**TELC 5006. TEACHERS AS AGENTS OF CHANGE. (3)** This course is designed for those students working in a public school environment on the Alternative/Transitional License or the Occupational License. The course is designed to provide an overview of current issues, trends, and problems that are commonplace to teaching in public school settings. Students will engage in analytic learning experiences which focus on: a) teaching in urban, suburban, and rural settings, b) meeting the needs of diverse student populations, c) historical, sociological, and philosophical aspects of education in an diverse society, d) the legal and financial elements and equality/inequality of access and resources, e) governance issues related to public schooling in the U.S., f) developing knowledge and skills regarding professionalism, national and state initiatives, effective teaching, and licensure, and g) action research to improve current practice.

## GRADUATE FACULTY

Eleni D. Elder, Associate Professor

B.A., 1985, University of Mary Washington; M.Ed., 1998, Virginia Commonwealth University; Ed.D., 2002, Florida Atlantic University.

Carole A. de Casal, Professor

B.A., 1971, M.Ed. 1978, Ed.D. 1980, University of Utah. MBA, 2007, Novus University.

Denise Dunbar, Professor

B.S., 1974, Northern Illinois University; M. Ed., 1983, George Peabody College at Vanderbilt University; Ed.D., 1989, George Peabody College at Vanderbilt University.

Janet M. Finch, Professor

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

Kirmanj Gundi, Professor

B.S., 1986, Tennessee State University; M.Ed., 1994, Tennessee State University; Ed.D., 1998, Tennessee State University.

Alethea Hampton, Assistant Professor and Assistant Dean

B.S., 1999, Tougaloo College; M.Ed., 2005, University of Alabama at Birmingham; Ed.D., 2009, Alabama State University.

Kimberly King-Jupiter, Professor and Dean

B.S., 1987, Grinnell College; M.S. 1993, Ph.D., 1998, Indiana University-Bloomington.

Robbie Melton, Professor

B.S., 1972, Wayne State University; M.Ed., 1974, Wayne State University; Ph.D., 1979, University of Michigan.

Walter Milton, Assistant Professor

B.S., 1989, Albany State University; M.S., 1991, State University of New York, Brockport; Ph.D., 2005, University of Buffalo.

Trineta L. Respress, Professor and Department Chair

B.B.A., 1989, University of West Georgia; M.A., 1994, Tennessee Technological University; Ed.D, 1997, East Tennessee State University.

Karen Leigh Stevens, Professor

B.A., 1977, Belmont College; M.Ed., 1988, Belmont College; Ed.D., 1997, Vanderbilt University.

Eric Vogel, Professor

B.A., 1971, Louisiana State University at New Orleans; M.Ed., 1974, University of New Orleans; Ph.D., 1983, Florida State University.

Jewell Winn, Assistant Professor

B.B.A., 1981, Middle Tennessee State University; M.P.A., 1988, Tennessee State University; Ed.D., 2008, Tennessee State University.

## DEPARTMENT OF PSYCHOLOGY

**Kiesa Kelly, Ph.D., Department Chair**

**OFFICE: 303-C CLAY (EDUCATION) BUILDING**

**(615) 963-5157**

[kkelly5@tnstate.edu](mailto:kkelly5@tnstate.edu)

The graduate program in psychology offers curricula leading to the Doctor of Philosophy degree in Psychology in two concentrations: Counseling Psychology and School Psychology; the Master of Science in Psychology degree with two concentrations: Counseling Psychology and School Psychology; and a Master of Science in Professional School Counseling. The course offerings consist of a core of basic psychology courses common to preparation of the student for work and certification or licensure (if required) in the area of specialization.

Note: Graduate degrees in Psychology are not an assurance of certification and/or licensure in the fields of psychology, counseling, and/or school counseling. Degrees are meant to be preparation only. Suggested additional course work and experience will be addressed in annually updated student handbooks and additional material(s). As informed consumers of education, students should always check the license and certification requirements in the state(s) or countries in which they plan to work.

**MAJOR: PSYCHOLOGY**  
**DEGREE: DOCTOR OF PHILOSOPHY (Ph.D.)**  
**CONCENTRATIONS:**  
**COUNSELING PSYCHOLOGY**  
**SCHOOL PSYCHOLOGY**

The doctoral program offered by the Department of Psychology includes two concentrations: Counseling Psychology and School Psychology. Both concentrations seek to prepare graduates for licensure as Counseling Psychologists and School Psychologists as established by the State Board of Examiners in Psychology - Division of Health Related Boards and the Tennessee Board of Education, respectively. Prior graduate course work and the student's goals and objectives are considered in determining annual admissions and the individual student's program of study.

### Student Learning Outcomes:

Students will:

1. Have an advanced knowledge of psychology.
2. Demonstrate knowledge of human behavior with a multicultural perspective.
3. Have knowledge of research, statistics, and evaluation methods that will enable them to conduct research, publish, present research, and use research to improve psychological knowledge, practice, and understanding.
4. Acquire knowledge of and experience with information sources and technology relevant to psychological practice, research, and education.
5. Be prepared to be ethical scientist-practitioners by demonstrating knowledge of ethical standards, legal mandates, laws, and professional standards in practice, service, and personal endeavors.

6. Effectively integrate formal academic knowledge, theory and research with the delivery of psychological services and education in a variety of professional settings and to a multicultural clientele.
7. Value personal and professional growth, cultural diversity, societal awareness and respect for others.

### Admissions Requirements

A master's degree in psychology, counseling, school psychology, or a related area is required. There is a ceiling on the number of students admitted to the program in a given year. All applicants must submit the following materials to the Graduate School Office by December 1st for admission in the Fall:

1. An application for admission to the Graduate School.
2. Transcripts of all undergraduate and graduate course work. A minimum grade point average of 3.25 at the Master's level is required.
3. Quantitative and Verbal Scores on the Graduate Record Examination (GRE) or Millers Analogy Test (MAT) are required. While both the GRE and MAT are acceptable, the GRE is strongly preferred. The minimal acceptable standards for admission are 3.25 Master's GPA. A typical GRE score for students in the program is 150 (Verbal) and 147 (Quantitative). However, the program does recognize that multiple factors impact scores and that scores do not represent all of a student's unique abilities. Students with scores below these averages are welcome to apply. Exceptions may be considered for applicants with extraordinary qualities who have demonstrated excellence in the field of work or research, and who add diversity to the program. However, a student whose GRE scores are significantly lower than others in the program or whose MAT is less than 425 is not normally considered for admission. Conditional admission is not offered at the Doctoral level.
4. A work history, that is a curriculum vitae that includes work experience and research experience.
5. Three letters of recommendation submitted on the doctoral recommendations forms distributed by the Graduate School.
6. A supplemental application to the Counseling Psychology (Ph.D.) program.

Selection of students for the Doctoral Program in Psychology is highly competitive. Applicants whose materials are received by the December 1st deadline will be evaluated by the respective program committees that will select the applicants to be interviewed on the campus in early February. An interview is required for admission. In keeping with the Uniform Notification Date established by the American Psychological Association, if selected for admission, the applicant will be notified and must respond not later than April 15th to the offer. Admissions are based upon the following criteria:

1. Past academic performance as indicated by undergraduate and graduate grade point average, test scores, and course work at the undergraduate and graduate levels in Psychology.
2. Research and scholarly pursuits as demonstrated by research involvement, presentations, publications, and writing sample.
3. Counseling and interpersonal skills as demonstrated by work experiences including practicum and internships as well as work in the fields of counseling, school psychology, other professional activities, and supervised experiences.
4. Goodness of fit between the goals of the applicant and the goals of the program.

5. Commitment to the field as evidenced by licensure or certification in Psychology or Education as well as involvement in professional associations.
6. Experience with diverse populations.

**General Departmental Requirements**

In order to obtain the Doctorate of Philosophy in Psychology in Counseling or School Psychology a student must successfully complete the following:

1. A minimum of sixty-six (66) semester hours of approved course work for either the Counseling Psychology concentration or School Psychology concentration beyond the master’s degree.
2. A residency consisting of two (2) consecutive semesters of full-time enrollment (a minimum of 9 credit hours per semester).
3. A written qualifying examination.
4. A written comprehensive examination and an oral examination.
5. An approved internship (explained below).
6. A dissertation (explained below).

**Internship**

A 2000 hour (minimum) pre-doctoral internship is required of the Ph. D. in both Counseling and School Psychology concentrations. Placement of our students in acceptable internships has traditionally occurred, however, obtaining an internship is based upon a national selection process and the University does not guarantee the availability of or selection for an internship. APA approved internships are mandatory for students in the Counseling Psychology concentration except in extenuating circumstances (e.g., geographically bound, family circumstances, etc.). Students seeking this exception must make their desire known in writing to the Program Coordinator as soon as they become aware of the need to for such an alternative. In this case, the internship must be listed in the Association of pre- and Post-Doctoral Internship Center (APPIC) directory. In order to fulfill the internship requirement, out-of-state relocation maybe necessary.

**Dissertation**

A student may not enroll in Dissertation until the semester after s/he has successfully completed the comprehensive examination. Once enrolled, the student must continuously re- enroll each semester until the dissertation is successfully completed and defended. Only research that is of an original nature will be accepted. It is required that the dissertation proposal be approved prior to application for internship.

**COUNSELING PSYCHOLOGY CONCENTRATION**

The doctoral concentration in Counseling Psychology is accredited by the American Psychological Association. It is also a designated Doctoral Program in Psychology of the American Association of State Psychology Boards (AASPB) and is listed in the Council for the National Register of Health Service Providers in Psychology. The Counseling Psychology concentration is designed for students seeking training as Scientist-Professionals. The Concentration requires a minimum of sixty-six (66) semester hours. These hours 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, history and systems of psychology, psychometrics, developmental psychology, and theories of personality. It is the doctoral student’s responsibility, upon acceptance of an offer, to forward to the Program Coordinator a copy of the student’s official transcripts and other materials such as syllabi so that the Department can review the student’s prior work to insure that such graduate work has been completed and to recommend needed courses.

A student enrolled in the Counseling Psychology concentration may take the Qualifying Examination for the doctoral degree only after completing all prerequisite master’s level courses, and Statistics and Computer Applications for Research (PSYC 7136).

**PROGRAM OF STUDY**

PSYC 7270	Multicultural Counseling	3
PSYC 7136	Statistics & Computer Applications	3
PSYC 7137	Advanced Statistics & Research Methods	3
PSYC 7730	Qualitative Research or PSYC 7536	3
PSYC 7150	Change Processes—Theory, Research & Efficacy	3
PSYC 7160	Pre-Practicum	1
PSYC 7255	Psychopathology	3
PSYC 7256	Assessment of Psychopathology	3
PSYC 7260	Practicum	1
PSYC 7535	Consultation and Program Evaluation	3
PSYC 7050	Ethics & Professional Issues in Counseling Psychology	3
PSYC 7365	Doctoral Practicum in Counseling Psychology	2
PSYC 7366	Doctoral Practicum in Counseling Psychology	2
PSYC 7367	Doctoral Practicum in Counseling Psychology	3
PSYC 7368	Doctoral Practicum in Counseling Psychology	3
PSYC 7555	Individuals: Assessment, Theory & Intervention	3
PSYC 7556	Couples, Families & Systems: Assessment, Theory & Intervention	3
PSYC 7557	Supervision: Assessment, Theory & Intervention	3
PSYC 7750	Career Development: Theories, Methods & Contemporary Issues	3

**Electives 9**

Courses completed as electives may be taken to satisfy the program elective requirement or may be taken under the specialization sequences. Current specialization sequences are as follows:

**Military Specialization:**

PSYC 7170	Social Psychology: Research in Gender Roles	3
PSYC7559	Assessment, Theory & Interventions with Military Service Members and Families	3
PSYC 7760	Trauma & Crisis Interventions	3

**Dissertation 6-15**

PSYC 8110	Dissertation Research.
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Prior to enrolling in PSYC 8110, students must have successfully completed comprehensive examinations. Once students begin the dissertation, they must register for PSYC 8110 every semester until the dissertation is complete and defended. After the fifth registration for dissertation, students register in "Dissertation Continuation" at a reduced fee.

### Doctoral Internship 3-3-3

PSYC 8095, 8096, 8097 Internship (Counseling Psychology)  
The successful completion of one year, full-time internship or a two year half-time internship in Psychology at a site approved by the Program Coordinator of Counseling Psychology is required for the awarding of the degree. Students must enroll in PSYC 8095, 8096, 8097 during the internship year.

### SCHOOL PSYCHOLOGY CONCENTRATION

The doctoral concentration in School Psychology provides advanced training to work as a professional school psychologist in schools. The program utilizes an ecological-contextual orientation in working with children, schools and families.

The doctoral concentration in School Psychology requires a minimum of sixty-six (66) semester hours. These hours include core courses in education, psychology, guided specialty electives, practicum and dissertation.

A student admitted to the Ph.D. degree program in School Psychology who have been awarded the Ed.S. degree in school psychology from accredited institutions may be granted full credit for a maximum of thirty hours if the hours are acceptable to the students program.

A student enrolled in the School Psychology concentration may take the qualifying examination for the doctoral degree only after graduate courses in the following areas have been completed: statistics, psychometrics, theories of counseling, individual intelligence testing and learning theory. Typically students complete the above graduate work in their master's program prior to entry into the doctoral program. It is the doctoral student's responsibility during the first semester of enrollment to meet with the assigned faculty advisor to review the student's work to insure that such graduate work has been completed and to recommend needed courses.

### PROGRAM OF STUDY

EDCI 6300	Multi-cultural Education	3
PSYC 6130	Social Bases of Behavior	3
PSYC 6430	History & Systems of Psychology	3
PSYC 6900	Role and Function of the School Psychologist	3
PSYC 7050	Ethics & Professional Issues in Counseling in Psychology	3
PSYC 7136	Statistics & Computer Applications	3
PSYC 7137	Advanced Statistics & Research Methods	3
PSYC 7150	Change Processes - Theory, Research & Efficacy	3
PSYC 7160	Pre-Practicum	1
PSYC 7255	Psychopathology	3
PSYC 7256	Assessment of Psychopathology	3
PSYC 7260	Practicum	1
PSYC 7465	Doctoral Practicum in School Psychology	2
PSYC 7466	Doctoral Practicum in School Psychology	2
PSYC 7555	Individuals: Assessment, Theory & Intervention	3
PSYC 7557	Supervision: Assessment, Theory &	

	Intervention	3
PSYC 7530	Consultation and Program Evaluation	3
OR		
PSYC 7730	Qualitative Research	3
PSYC 7710	Psycho educational Assessment	3

### Dissertation 6-15

PSYC 8110 Dissertation Research  
Prior to enrolling in PSYC 8110, students must have successfully completed comprehensive examinations. Once students begin the dissertation, they must register for PSYC 8110 every semester until the dissertation is complete. After the fifth registration for dissertation, students register in "Dissertation Continuation" at a reduced fee.

### Doctoral Internship

PSYC 8105, 8106, 8107 Internship (School Psychology)  
The successful completion of one year, full-time internship or a two year half-time internship (minimum 2000 hours) in Psychology at a site approved by the Program Coordinator of School Psychology is required for the awarding of the degree. Students must enroll in PSYC 8105, 8106, 8107 during the internship year.

**MAJOR: PSYCHOLOGY**  
**DEGREE: MASTER OF SCIENCE (M.S.)**  
**CONCENTRATIONS:**  
**COUNSELING PSYCHOLOGY**  
**SCHOOL PSYCHOLOGY**

### COUNSELING PSYCHOLOGY CONCENTRATION

The curriculum is designed for students seeking preparation for a career in various types of mental health settings and related organizations, or for students planning to pursue a Ph.D.. The primary goal is to provide a solid psychological core with a focus on emotional, social, vocational, health, and educational issues across the life span. Recognizing the value of both practice and research, the Counseling Concentration offers two options: thesis or non-thesis.

### Student Learning Outcomes:

Students will:

1. Demonstrate performance ability through practica experiences.
2. Demonstrate a knowledge base specific to psychology.
3. Have a thorough understanding of the psychological foundations of behavior.
4. Be knowledgeable to use measurement, statistics, research, and program evaluation methods in the delivery of psychological services.
5. Be prepared to provide psychological services to individuals and groups.
6. Demonstrate ethical behavior, recognize unethical behavior, and respond ethically in practice, research, and scholarship.
7. Gain experience in respect and value of cultural diversity and demonstrate sensitivity for diverse social, economic, and environmental experiences.
8. Complete practice experiences designed for mental health advocacy and service.

An additional aspirational goal is for students to develop a desire for life-long learning.

### Admission Requirements

Admission requires an undergraduate major in psychology or related field. Undergraduate study should include one course in general psychology, elementary statistics, research methods, abnormal psychology, physiological psychology, social psychology and developmental psychology. The minimum acceptable requirements for admission to the program are a 2.5 or higher GPA, and reported GRE (Verbal and + Quantitative) or MAT score that is comparable to others in the program for unconditional admission. GRE scores are preferable to MAT scores. Students admitted conditionally must earn a "B" or better in the first twelve hours of graduate work to gain the unconditional status..

In addition the student should submit in duplicate ALL of the following -information in a single envelope directly to the Graduate School:

1. Three (3) letters of recommendation - one of which should be from an academic advisor or his or her designee.
2. A letter of aspiration (personal statement) indicating why the applicant has chosen to pursue a degree in this area along with his or her academic and career goals.
3. A copy of all undergraduate transcripts.
4. Once the above criteria have been met, the Coordinator of the program will contact the applicant and arrange an interview with the members of the Graduate Admissions Committee prior to final recommendation for admission to the program.

All application materials including the letters of recommendation and aspiration must be received by the Graduate School by February 1 for admission for fall semester.

### Degree Requirements

A minimum of four semesters and a summer term of residential study are required to complete the program within a two year period. The Thesis Option requires fifty-three (53) semester hours of approved course work. The Non-Thesis Option requires fifty-eight (58) semester hours of approved course work.

### Thesis Option

This option is appropriate for students planning to pursue a Ph.D. The candidate must submit a thesis on a topic approved by the thesis advisor. A minimum of fifty-three (53) semester hours of approved course work is required.

### Non-Thesis Option

The non-thesis option is for students who choose to focus on training in the practice aspects of psychology. Students who select the non-thesis option will be required to take a minimum of 58 hours of course work (including 6 hours of electives above the core requirements) and must pass a Comprehensive Examination to meet the requirements for the degree.

### PROGRAM OF STUDY

#### Required Core Courses—52 Hours (Thesis and Non-thesis)

PSYC 5030	Biological Bases of Behavior	3
PSYC 5040	Statistics & Methodology	3
PSYC 5060	Cognitive/Affective Bases of Behavior	3
PSYC 5070	Professional Issues and Ethics in Counseling Psychology	3

PSYC 5100	Counseling and Interviewing Skills	2
PSYC 5135	Abnormal Psychology	3
PSYC 5136	Theories of Personality	3
PSYC 5140	Statistics & Computer Applications	3
PSYC 5170	Counseling Theory	3
PSYC 5200	Advanced Counseling and Interviewing Skills	2
PSYC 5270	Vocational Theory & Testing	3
PSYC 5530	Psychometrics	3
PSYC 5630	Child and Adolescent Development	3
PSYC 6130	Social Bases of Behavior	3
PSYC 6170	Individual Tests of Intelligence	3
PSYC 6430	History & Systems of Psychology	3
PSYC 6505	Masters Counseling Psychology Practicum	3
PSYC 6506	Masters Counseling Psychology Practicum	3

### Thesis Option Requirement

PSYC 6540	Thesis	1
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### Non-Thesis Option Requirements

#### Electives — 6 hours (Any 2 of the following courses)

PSYC 5190	Group Counseling & Guidance	3
PSYC 5230	Learning Theories	3
PSYC 5570	Individuals, Couples & Family Systems Assessment: Theory & Intervention	3
PSYC 6370	Interest, Aptitude & Achievement Testing	3
PSYC 6550	Health Psychology	3
PSYC6560	Violence in Interpersonal Relations	3

### SCHOOL PSYCHOLOGY CONCENTRATION

Admission requires an undergraduate major in psychology or related field. Undergraduate study should include one course in general psychology, elementary statistics, research methods, abnormal psychology, physiological psychology, social psychology and developmental psychology. The minimum acceptable requirements for admission to the program are a 2.5 or higher GPA, and reported GRE (Verbal and + Quantitative) or MAT score that is comparable to others in the program for unconditional admission. GRE scores are preferable to MAT scores. Students admitted conditionally must earn a "B" or better in the first twelve hours of graduate work to gain the unconditional status.

In addition the student should submit in duplicate ALL of the following -information in a single envelope directly to the Graduate School:

1. Three (3) letters of recommendation - one of which should be from an academic advisor or his or her designee.
2. A letter of aspiration (personal statement) indicating why the applicant has chosen to pursue a degree in this area along with his or her academic and career goals.
3. A copy of all undergraduate transcripts.
4. Once the above criteria have been met, the Coordinator of the program will contact the applicant and arrange an interview with the members of the Graduate Admissions Committee prior to final recommendation for admission to the program.

All application materials including the letters of recommendation and aspiration must be received by the Graduate School by February 1 for admission for the fall semester.

### Degree Requirements

A minimum of four semesters and a summer term of residential study and forty (43) semester hours of approved course work and thesis are required. The candidate must submit a thesis on a topic approved by the thesis advisor. These courses are prerequisites for Ph.D. degree in School Psychology.

#### PROGRAM OF STUDY

Required Courses—43 Hours

EDCI 5300	Multicultural Education	3
EDSE 5530	Education & Psychology of Exceptional Children	3
PSYC 5030	Biological Bases of Behavior	3
PSYC 5040	Statistics & Methodology	3
PSYC 5100	Counseling and Interviewing Skills	2
PSYC 5140	Statistics & Computer Applications	3
PSYC 5170	Counseling Theory	3
PSYC 5200	Advanced Counseling and Interviewing Skills	2
PSYC 5230	Theories of Learning	3
PSYC 5530	Psychometrics	3
PSYC 5630	Child and Adolescent Development	3
PSYC 6130	Social Bases of Behavior	3
PSYC 6170	Individual Tests of Intelligence	3
PSYC 6540	Thesis	1
PSYC 6900	Role and Function of the School Psychologist	3
PSYC 6540	Thesis	1

**MAJOR: PROFESSIONAL SCHOOL COUNSELING**  
**DEGREE: MASTER OF SCIENCE (M.S.)**  
**CONCENTRATIONS:**  
**PRE-K-12 SCHOOL COUNSELING**

#### PRE-K-12 SCHOOL COUNSELING CONCENTRATION

The primary goal of the Professional School 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. Professional School Counseling curriculum is designed to meet the requirements for licensure as set forth by the Tennessee State Board of Education.

NOTE: Applicants must successfully complete an interview with the TSU Professional School Counseling Community Advisory Council.

### Degree Requirements

A minimum of four semesters and a summer term of residential study and forty-eight (48) semester credits (51 hours for those not holding a teaching license) 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 156 on the Praxis II Professional School Counselor (K-12) #5421 Specialty Area Test. The test application is available at [www.ets.org/praxis](http://www.ets.org/praxis).

#### PROGRAM OF STUDY

Required Courses - 48 credits\*

\* Fifty-one credits are required of all students who do not hold a valid teacher's certificate/license.

<b>AREA I</b>	<b>Human Growth and Development (6 Hours)</b>	
PSYC 5630	Child and Adolescent Development	3
EDSE 5530	Education and Psychology of Exceptional Children	3
<b>AREA II</b>	<b>Social and Cultural Foundations (9 Hours)</b>	
PSYC 5136	Abnormal Psychology	3
PSYC 5570	Individual, Couples, and Family Systems	3
PSYC 6130	Social Bases of Behavior	3
<b>AREA III</b>	<b>The Helping Relationship (*12 or 15 Hours)</b>	
PSYC 5170	Counseling Theories	3
*PSYC 6360	Pre- Practicum Field Experience	3
PSYC 6320	Practicum in Pre-K-12 School Counseling	3
PSYC 6405	Internship - Elementary School Counseling	3
PSYC 6406	Internship - Secondary School Counseling	3
<b>AREA IV</b>	<b>Group Work (3 Hours)</b>	
PSYC 5190	Group Counseling and Guidance	3
<b>AREA V</b>	<b>Career and Lifestyle Development (3 Hours)</b>	
PSYC 5270	Vocational Choice Theory and Testing	3
<b>AREA VI</b>	<b>Appraisal (6 Hours)</b>	
PSYC 5530	Psychometrics	3
PSYC 6370	Interests, Aptitude and Achievement Testing	3
<b>AREA VII</b>	<b>Research and Program Evaluation (3 Hours)</b>	
PSYC 5040	Statistics and Methodology	3
<b>AREA VIII</b>	<b>Professional Orientation (6 Hours)</b>	
PSYC 5080	Professional Issues and Ethics for Pre-K-12 School Counselors	3
PSYC 5090	Guidance and Counseling Services in the schools	3

#### Required Field Experience

Practicum: Students are required to complete 100 clock hours of observation and participation in a middle school counseling setting.

Internships: Students are required to complete 300 clock hours (approximately 20-25 hours per week) of on-site field experience and practice during **each** of two semesters of internship experience: Elementary School Counseling (6405) and Secondary School Counseling (6406).

#### ENDORSEMENT ONLY STUDENTS

Individuals who seek the State Department of Education endorsement through the Pre-K-12 School Counseling concentration, but do not intend to pursue a degree through TSU, must:

1. Have earned a Master's Degree in School Counseling or a related area.

2. Apply for non-degree admission to the Graduate School.
3. Apply for acceptance into the program and for a mandatory Interview with the Professional School Counseling Advisory Council by scanning and email to [jlee6@tnstate.edu](mailto:jlee6@tnstate.edu) one electronic file to the program coordinator materials by April 1<sup>st</sup>.
  - a) All previous transcripts
  - b) Letter of intent
  - c) 3 letters of recommendation, and
  - d) Proof of application to the Graduate School.

## COURSE DESCRIPTIONS

**PSYC 5030. BIOLOGICAL BASES OF BEHAVIOR. (3)** An examination of the theory and research related to variations of environmental energy to the physiological correlates of human behavioral processes specifically psychological reactions of sensing and perception are covered. Prerequisites: Admission to the Graduate School and PSYC 3300 (undergraduate physiological psychology).

**PSYC 5040. STATISTICS AND METHODOLOGY. (3)** Conceptual treatment of quantitative statistical tools and research methodology for use in research, testing and understanding scientific literature. The student is introduced to different methods of planning and conducting research. Emphasizes the logic underlying research investigation, methodology, analysis, and interpretation of data. Prerequisite: PSYC 2180 (Undergraduate Elementary Statistics).

**PSYC 5060. COGNITIVE AND AFFECTIVE BASES OF BEHAVIOR. (3).** This course is designed to introduce students to cognitive and affective processes that underlie thought, perception, emotion and psychopathology. Topics include: pattern recognition, attention, memory, language and cognitive development. The course will emphasize the clinical applications and impact of these processes. The influences of psychosocial factors (culture, ethnicity, economic, gender, and other diversity issues) will be incorporated. Prerequisites: Admission to the Graduate School.

**PSYC 5070. PROFESSIONAL ISSUES AND ETHICS IN COUNSELING PSYCHOLOGY. (3)** Seminar in Professional ethical and legal issues in the field. Ethical guidelines for research, teaching, human services, and public policy will be covered. Prerequisite: Admission to the Graduate School.

**PSYC 5080. PROFESSIONAL ISSUES & ETHICS FOR PRE-K-12 SCHOOL COUNSELORS. (3)** This seminar course is designed to introduce students to ethical codes, legal guidelines and professional issues relevant to the field of school counseling. Students will be exposed to a wide range of topics and readings, and be expected to write an original research paper on a salient topic of their choosing. Prerequisites: Admission to the Graduate School.

**PSYC 5090. GUIDANCE AND COUNSELING SERVICES IN THE SCHOOLS. (3)** Master's Specialty Core course for Pre-K-12 concentration. History, principles, and philosophy of School Guidance and Counseling Services. This course examines the management of Guidance and Counseling Services which includes definition of roles, functions, the use of resources, referrals, consultation, use of time, facilities, budget and the use of research and evaluation to improve programs. Students holding a master's degree and seeking certification must take this course. Prerequisite: Admission to the Graduate School.

**PSYC 5100. COUNSELING AND INTERVIEWING SKILLS (2).** Supervised laboratory experience in developing essential interpersonal skills for counseling effectiveness, self-exploration and videotape analysis; introduction to client intake and initial diagnostic procedures; introduction to ethical considerations; the influence of gender, racial-ethnic, and other factors related to diverse populations applications to counseling. Prerequisites: Admission to the Graduate School.

**PSYC 5135. THEORIES OF PERSONALITY (3).** Theoretical, contemporary and empirical comparisons of personality development systems to account for both normal and deviant behavior. Prerequisites: Admission to the Graduate School.

**PSYC 5136. ABNORMAL PSYCHOLOGY (3).** Theories of abnormal personality and their expansion into applied techniques in advanced psychopathology and diagnosis. Introduction to the theoretical, contemporary and empirical comparisons of personality development systems to account for both normal and deviant behavior. Prerequisites: PSYC 5135. No prerequisite for Professional School Counseling Majors.

**PSYC 5140. STATISTICS AND COMPUTER APPLICATIONS. (3).** Complex data analysis and interpretation of additional multivariate topics not covered in PSYC 5040 with the use of statistical analysis packages (e.g., SPSS/Windows) and computer application to research and educational problems in order to facilitate better research consumerism by practicing professionals. Prerequisite: PSYC 5040.

**PSYC 5170. COUNSELING THEORY. (3)** Integration of personality theory into counseling theories. Exploration of major trends in psychotherapeutic theory, techniques and current research. Philosophical bases of helping relationships; development of counselor and client self-awareness. Theory and research on issues and problems in counseling clients from different cultural backgrounds will be emphasized. Introduction to the most current Diagnostic Statistical Manual (DSM) will be included. Prerequisites: PSYC 5135 and PSYC 5136.

**PSYC 5190. GROUP COUNSELING AND GUIDANCE. (3)** Specialty Core Course for Pre-K-12. Designed to prepare the student for practicum and internships in Pre-K-12 counseling as it relates to group process, dynamics, techniques including establishing goals, group selection, time management, presentation and facilitation. Prerequisite: PSYC 5170.

**PSYC 5200. ADVANCED COUNSELING AND INTERVIEWING SKILLS. (2)** This course is designed to facilitate progressively greater degrees of skill development in counseling. This practicum provides the opportunity for the student to engage in performing the roles of counselor under supervision. Includes a weekly seminar-type class for consideration of ethical issues, problems encountered in practicum and for relating theory to practice and specific training in interviewing, assessment, treatment planning and termination issues in counseling, clinical or school settings. Involves supervised laboratory exposure to clients with developmental issues and skills assessment. If satisfactory level of competence is not obtained by established time frame, the student will repeat course prior to progressing to PSYC 6505, 6720, or 6910. Students must demonstrate proof of current professional liability insurance. Prerequisites: PSYC 5100; admission to the graduate program in psychology.

**PSYC 5230. LEARNING THEORIES. (3)** This course emphasizes the major problem areas, methodology, theories and research in complex behaviors. Prerequisite: Admission to the Graduate School.

**PSYC 5270. VOCATIONAL THEORY AND TESTING. (3)** Theories and empirical research related to vocational choice, decision-making, and assessment including interest, aptitude, and ethics as it relates to the world of work over the lifespan. The student will be able to demonstrate the application of this knowledge in career exploration through formal assessment including technological approaches to career planning. Prerequisites: Admission to a graduate program in Psychology.

**PSYC5330. MEASUREMENT AND EVALUATION FOR THE CLASSROOM. (3)** A course primarily concerned with preparing teachers for administering, scoring, processing, and using the results of standardized and teacher-made tests, and other measures of progress in school; also preparation is offered in the construction of objective and subjective tests. Attention is also given to various tests as they relate to the functions, techniques, and tools of classroom assessment. Prerequisites: Admission to Teacher Education required for those seeking teacher certification to become teachers. Others enrolled with permission of the Psychology department head.

**PSYC 5430. ADVANCED EDUCATIONAL PSYCHOLOGY. (3)** A consideration of the principles, as applied to education. Issues relevant to intellectual development, socialization, and educational evaluation are examined. Additionally, teacher variables and student variables in the instructional process are explored.

**PSYC 5530. PSYCHOMETRICS. (3)** Basic psychometric concepts to prepare the student for subsequent evaluation instruments. Origin and logic of testing, criteria for judging tests, standardization, reliability, and validity and principles of test development and construction. Examination of principles, strategies, and methodologies of interviewing and report writing of measurement of individual and group differences. Special emphasis is placed upon interpreting these concepts in light of diversity issues. Prerequisite: PSYC 5040; Admission to graduate program in Psychology or Professional School Counseling.

**PSYC 5570. INDIVIDUALS, COUPLES, & FAMILY SYSTEMS ASSESSMENT: THEORY & INTERVENTION. (3)** Theory, research and assessment techniques related to treatment of individuals, couples, & traditional families and non-traditional family systems including impact of personal and vocational concerns on the system. Prerequisites: PSYC 5170.

**PSYC 5630. CHILD & ADOLESCENT DEVELOPMENT. (3)** Theories and research of child and adolescent development in the normal individual. Emphasis on human socialization, physical, cognitive and emotional development from conception through adolescence. Prerequisites: Admission to the Graduate School; PSYC 5040.

**PSYC 6130. SOCIAL BASES OF BEHAVIOR. (3)** Theoretical explanations and empirical research related to of human behavior in diverse social groupings. Emphasis on dynamics of group processes, the psychological basis of group behavior, conflict resolution and evaluation of social programs. Prerequisites: PSYC 5030, PSYC 5230, PSYC 5530 or permission of instructor.

**PSYC 6170. INTELLECTUAL ASSESSMENT. (3)** Offers training and practice in administering, scoring, analysis and transmission of test data to both clients and other professionals. Emphasis on the use of standardized individual tests of intelligence. Ethics and multi-cultural concerns related to assessment are covered. The student is required to acquire proficiency in the use of the Weschler and the Stanford-Binet. Scales. Prerequisite: PSYC 5530; written permission of the instructor is required prior to enrolling.

**PSYC 6320. PRACTICUM IN PRE-K-12 SCHOOL COUNSELING. (3)** This practicum provides an opportunity for the student to engage in working with clients under supervision in the school setting. It provides for the development of individual and group counseling skills. Students must commit to completing 100 hours within the semester during middle school hours of operation. Prerequisite: PSYC 5170, 5190, and 6360; Permission to enroll requires approval of Coordinator of Pre-K-12 School Counseling Program one semester prior to enrollment.

**PSYC 6360. PRE-PRACTICUM FIELD EXPERIENCE FOR PRE-K-12. (3)** This course is designed for students with no prior teaching experience. Students enrolled in this class will gain exposure to the whole teaching and counseling milieu through observation in the classroom, assisting with specific classroom activities and participating in case conferences with school personnel which would include the counselor and other members of the student ser-vices team. Prerequisites: Admission to the graduate program in Professional School Counseling.

**PSYC 6370. INTEREST, APTITUDE & ACHIEVEMENT TESTING. (3).** Application of principles, strategies, and methodologies of interviewing and report writing in the areas of interests, aptitude, and achievement testing with diverse populations. Prerequisite: PSYC 5530 or equivalent with approval of instructor; Admission to graduate program in Psychology or Professional School Counseling.

**PSYC 6405. INTERNSHIP: ELEMENTARY SCHOOL COUNSELING. (3)** Interns experience the wide range of activities expected of an elementary school counselor, including individual and group counseling; group guidance activities; group assessment; consultation with colleagues and parents; and coordination of guidance and counseling activities. Students spend 300 clock hours during the term under the direct supervision of an experienced, licensed school counselor on-site during the school day. Permission of Professional School Counseling Program Coordinator and application required one term prior to enrollment. Prerequisites: PSYC 5080,5090, 5170, 5190, 5270, 6360 and 6320 and successful completion of Praxis for School Counselors.

**PSYC 6406. INTERNSHIP: SECONDARY SCHOOL COUNSELING. (3)** Interns experience the wide range of activities expected of a secondary school counselor, including individual and group counseling; group guidance activities; group assessment; consultation with colleagues and parents; and coordination of guidance and counseling activities. Students spend 300 clock hours during the term under the direct supervision of an experienced, licensed school counselor on-site during the school day. Permission of the Pre-K-12 Program Coordinator and application required one term prior to enrollment. Prerequisites: PSYC 5080,5090, 5170, 5190, 5270, 6360 and 6320.

**PSYC 6430. HISTORY AND SYSTEMS OF PSYCHOLOGY. (3)** A study of the historical development of the field of psychology with particular emphasis on contemporary psychology. Prerequisites: Admission to the Graduate School.

**PSYC 6470. INDIVIDUAL TESTING & REPORT WRITING. (3)** This course is part of a sequential competency based assessment series in the advanced study of psychoeducational assessment. Included are the study, administration, and interpretive report writing using measures of intelligence, behavior and achievement as well as assessment of emotion. Emphases of the course are psychoeducational diagnoses based on assessment outcomes. Meaningful psychoeducational recommendations, framed in an integrated psychological report are emphasized. Prerequisite: PSYC 5530 & 6170.

**PSYC 6505. MASTER'S PRACTICUM IN COUNSELING PSYCHOLOGY. (3)** Supervised practice in psychological work with clients within an approved or clinical setting. Supervision is provided by an onsite supervisor and a university supervisor. Students must obtain practica placements and have it approved with the appropriate program coordinator the semester before enrolling in this course. Students seeking licensure or certification also should take responsibility to check requirements for direct services and supervision with the appropriate boards. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to graduate program in psychology; approval of the Counseling Psychology Practicum Coordinator one semester prior to enrollment; PSYC 5200.

**PSYC 6506. MASTER'S PRACTICUM IN COUNSELING PSYCHOLOGY.(3)** Supervised practice in psychological work with clients within an approved counseling or clinical setting. Supervision is provided by an onsite supervisor and a university supervisor. Students must obtain practica placements and have them approved with the appropriate program coordinator the semester before enrolling in this course. Students seeking licensure or certification also should take responsibility to check requirements for direct services and supervision with the appropriate boards. At the time of enrollment, students must demonstrate proof of current professional liability insurance. Prerequisite: Admission to graduate program in Psychology; approval of the Counseling Psychology Practicum Coordinator one semester prior to enrollment; PSYC 6505.

**PSYC 6540. THESIS. (1)** A scientific research thesis is executed under the direct supervision of an approved graduate faculty person. A formal proposal meeting must be held prior to data collection. Generally, completion of the thesis takes at least two enrollments. After the initial enrollment, students enroll in the continuation section until the thesis is successfully defended. Upon acceptance of the written report and the passing of the oral examination, a grade will be awarded designating completion of the project. While students do not enroll in this class until the second year of the Master's, it is strongly encouraged that they consider possible research options throughout their training and speak with respective faculty regarding possible mutual research interests. Prerequisite: PSYC 5040 & 5140.

**PSYC 6550. HEALTH PSYCHOLOGY (3).** This course focuses on the branch of psychology concerning individual behaviors and lifestyles as they affect a person's physical health. Health psychology includes education, research, and counseling /intervention activities that promote health, prevent or treat illness, and identify health risk factors. The interrelationships between and among biological, social, psychological, intellectual, spiritual, emotional, cultural, and environmental factors and their influence on individual behaviors relating to health, illness prevention and coping will be examined. Prerequisite: Admission to the Graduate School and completion of 12 hours of graduate study.

**PSYC 6560. VIOLENCE IN INTERPERSONAL RELATIONS. (3).** This class will provide students with an overview of the theoretical paradigms examining the definitions, causes, and interventions of domestic violence. Theories of domestic violence will be examined from both the role of the survivor and perpetrator. The course will also explore violence within dating relationships and elder abuse. Attention will be given to the how culture, race and ethnicity impact domestic violence and how psychological interventions may be modified to meet the needs of various representative groups. Prerequisite: Admission to the Graduate School and completion of 12 hours of graduate study.

**PSYC 6570. PROJECTIVE TECHNIQUES. (3)** Designed to familiarize the student with the uses and administration of projective techniques. Research findings as to validity and applicability of the projective approach, ethics, and multi-cultural issues relevant to assessment are carefully examines. Prerequisite: Master's degree in Psychology or Counseling awarded; admission to the Doctoral or Ed.S. programs in Psychology or written permission of instructor prior to enrollment.

**PSYC 6725. PRACTICUM IN SCHOOL PSYCHOLOGY. (3)** First of a two semester practica sequence in an approved school setting. Supervised practice of psychological assessment, intervention and remediation strategies in a school setting. Prerequisite: PSYC 510 and admission to the school psychology program.

**PSYC 6726. PRACTICUM IN SCHOOL PSYCHOLOGY. (3)** Second of a two semester practica sequence in an approved school setting. Supervised practice of psychological assessment, intervention and remediation strategies in a school setting. Prerequisite: PSYC 6725 and admission to the school psychology program.

**PSYC 6900. ROLE AND FUNCTION OF THE SCHOOL PSYCHOLOGIST. (3)** A course designed to acquaint the student with information specific to the professional specialty of School Psychology. Topics covered will include History and Foundations of School Psychology, Alternative Models for the Delivery of School Psychological Services, Emergent Technologies and the Roles and Functions of the School Psychologist. Prerequisite: Admission to the Graduate School.

**PSYC 6920. PSYCHOLOGICAL DISORDERS OF CHILDREN. (3).** Provides overview of diagnosis and treatment of child/adolescent behavior disorders (ADHD, Conduct problems), emotional and social disorders (Depression, Anxiety, Phobias) and developmental and acquired disorders. Prerequisite: Admission to the Graduate School; PSYC 5130 and/or PSYC 5630.

**PSYC 6930. ALTERNATIVES TO STANDARDIZED ASSESSMENT. (3).** Theory and practice related to the use of non-normative assessment, including but not limited to structured behavioral observation, curriculum based assessment, functional analysis of behavior and student portfolios. Prerequisite: Admission to the Graduate School; PSYC 5530 or equivalent.

**PSYC 6940. CONSULTATION IN SCHOOLS (3).** Students learn consultation skills and processing utilizing a number of professional models such as Caplan's model, behavioral and problem solving models, crisis consultation and direct/indirect consultation. Prerequisite: Admission to the Graduate School; PSYC 5100.

**PSYC 7050. ETHICS & PROFESSIONAL ISSUES IN COUNSELING PSYCHOLOGY. (3)** Professional seminar in ethical, legal and professional issues in counseling psychology. Ethical guidelines for research, human services, teaching and public policy issues will be covered. Prerequisites: Admission to the doctoral program in Psychology.

**PSYC 7130. ADVANCED INDEPENDENT STUDY. (3)** An intense investigation of an area of study of special interest to the student. Prerequisite: Consent of the instructor and approval of the Department Head.

**PSYC 7136. STATISTICS & COMPUTER APPLICATIONS TO RESEARCH. (3)** Complex data analysis and interpretation of additional multi-variate topics with the use of statistical analysis packages (e.g., SPSS/Windows) and computer application to research and educational problems in order to facilitate research development and production in addition to consumerism. Course will include extra class requirements entailing time in the computer lab to complete assignments. Prerequisite: PSYC 5040 and PSYC 5140.

**PSYC 7137. ADVANCED STATISTICS & RESEARCH METHODS. (3)** Extension of issues introduced in PSYC 7136 and advanced statistical topics more germane to Psychology graduates conducting research in various settings. Prerequisite: PSYC 7136.

**PSYC 7150. CHANGE PROCESSES: THEORY, RESEARCH & EFFICACY. (3)** Theory and research of counseling and psychotherapeutic change, outcome, and empirically validated treatments focusing short-term approaches to counseling. Prerequisite: Admission to the doctoral program in Psychology; PSYC 7050.

**PSYC 7160. PRE-PRACTICUM. (1)** This pre-practicum experience is the first in a series of training experiences designed to facilitate progressively greater degrees of skill development in counseling psychology. Ethics of practice and working with diverse populations is stressed. Skills Assessment including areas such as Mental Status Examinations, interviewing, history taking and interpersonal dynamics must be satisfactorily completed prior to enrollment in subsequent Practice Core components. A review by the Counseling Psychology Program committee may result in the course being repeated if necessary. Failure to satisfactorily complete assessment of skills will result in removal from graduate program. Available only to graduate students in counseling psychology. Prerequisite: Admission to the doctoral program in Counseling Psychology.

**PSYC 7170. SOCIAL PSYCHOLOGY: RESEARCH IN GENDER ROLES. (3).** Sex differences and similarities from biological and psychological viewpoints and their interrelatedness with the educative and therapeutic process, including the topics of cognitive study and the motive to avoid success; impact of socialization agents including family, peer, media and school; sexual discrimination; theories and research on sex-role stereotyping and acquisition across cultures. Emphasis is on the integration of theory and research. Prerequisite: Admission to doctoral program in Psychology.

**PSYC 7255. PSYCHOPATHOLOGY. (3)** Theory, research and diagnosis of deviant behavior patterns through the lifespan. Emphasis on most current version of the Diagnostic Statistical Manual (DSM). Prerequisite: Admission to the doctoral program in Psychology; PSYC 7050 & 7150.

**PSYC 7256. ASSESSMENT OF PSYCHOPATHOLOGY. (3)** Theory, research and application of assessment to diagnosis of deviant behavior patterns throughout the lifespan. Emphasis on most current version of the Diagnostic Statistical Manual (DSM) and objective appraisal techniques. Prerequisite: PSYC 7255.

**PSYC 7260. PRACTICUM. (1)** This course is designed to provide students an opportunity to observe clinical work of advanced students and to provide counseling to clients with normal developmental concerns under faculty and advanced doctoral student supervision. Prerequisites: PSYC 7160.

**PSYC 7270. MULTICULTURAL COUNSELING: THEORY, RESEARCH, & INTERVENTION (3).** An elective in the doctoral program in Counseling Psychology, this course is a key component I the acquisition of counseling skills necessary to develop ethical practitioners and facilitators of learning with a multicultural perspective capable of integrating science and practice in a variety of settings and modalities. This course may serve as a substitute to meet the requirement of EDCI6300 Multi-cultural Education or may be taken strictly as an elective. Prerequisites: PSYC 7050 or permission of instructor.

**PSYC 7280. TEACHING OF PSYCHOLOGY. (3).** This course introduces the student to issues germane to the teaching of psychology. The course will include didactic as well as observational and applied experience with current theory and practice of teaching. Particular focus of experiential activities will be with undergraduate populations in a just-in-time approach, although graduate level teaching will also be covered in readings and discussion. This course is required of all students wishing to teach in the Department of Psychology. Prerequisite: Admission to the doctoral program in Psychology.

**PSYC 7320. LEARNING THEORIES. (3) FOR NON-PSYCHOLOGY MAJORS ONLY.** The major problem areas, methodology, theories and research in complex behavior. Prerequisite: Admission to the Graduate School.

**PSYC 7365, 7366, 7367, 7368, 7369. DOCTORAL PRACTICUM IN COUNSELING PSYCHOLOGY. (2,2,3,3,1).** Five semester sequence of doctoral advanced practice core for Counseling Psychology students. Includes field experience in an approved setting of which 75% should be direct clinical work, weekly supervision seminar with practicum students and university supervisor, and weekly individual supervision with licensed psychologist as site supervisor. During PSYC 7368, students will provide supervision to advanced masters students enrolled in PSYC 6506. Students enrolled in PSYC 7368 must have completed or concurrently be enrolled in PSYC 7557. PSYC 7369 will be offered to students desiring a specialization practicum (e.g., assessment, forensics) on an as-needed basis for summer elective enrollment and may be taken upon completion of PSYC 7365 & 7366. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of Counseling Psychology Practicum Coordinator one semester before beginning course; PSYC 7260.

**PSYC 7370, 7371. ADVANCED DOCTORAL PRACTICUM IN COUNSELING PSYCHOLOGY. (1,1).** Two semester sequence of doctoral advanced practice for Counseling Psychology students. Includes field experience in an approved setting of which 75% should be direct clinical work, weekly supervision seminar with practicum students and University supervisor, and weekly individual supervision with licensed psychologist as site supervisor. These sections of the practicum sequence will be offered on an as needed basis for enrollment of students who have completed the required practicum sequence. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of Counseling Psychology Practicum Coordinator one semester before beginning course; successful completion of PSYC 7368.

**PSYC 7465. DOCTORAL PRACTICUM IN SCHOOL PSYCHOLOGY. (2)** First of two semester sequence of doctoral Advanced Practice Core for School Psychology students. Practical experience in an approved setting. Weekly seminar with practicum students to interact and critique taped client interventions. Weekly individual supervision with university supervisor required. Each semester should entail approximately 300 hours of field experience of which 75% should be direct clinical work. On site supervision by a licensed psychologist is required in addition to faculty supervision. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of program coordinator one semester before beginning course; PSYC 7200.

**PSYC 7466. DOCTORAL PRACTICUM IN SCHOOL PSYCHOLOGY. (2)** Second of two-semester sequence of doctoral Advanced Practice Core for School Psychology students. Practical experience in an approved setting. Weekly seminar with practicum students to interact and critique taped client interventions. Weekly individual supervision with university supervisor required. Each semester should entail approximately 300 hours of field experience of which 75% should be direct clinical work. On site supervision by a licensed psychologist is required in addition to faculty supervision. All students must demonstrate proof of current professional liability insurance. Prerequisite: Permission of program coordinator one semester before beginning course; PSYC 7465.

**PSYC 7535. CONSULTATION AND PROGRAM EVALUATION. (3)** This course provides intermediate training in consultation and program evaluation that builds upon doctoral-level training in statistics and research methodology. This course will present models, techniques, and practices in the design, development, and implementation of program evaluations. The course will also provide training in consultation services in educational, governmental, health & human services, and research settings. Prerequisites: successful completion of PSYC7136 and PSYC7137 or equivalent.

**PSYC 7555. ASSESSMENT, THEORY & INTERVENTIONS WITH INDIVIDUALS. (3)** Theory, research, and assessment techniques related to treatment of individuals including personal and vocational concerns across the lifespan. Prerequisites: PSYC 7050,7150,7255, 7256.

**PSYC 7556. ASSESSMENT, THEORY & INTERVENTIONS WITH COUPLES, FAMILIES & SYSTEMS. (3)** Theory, research, and assessment techniques related to treatment of couples, families and nontraditional family systems including impact of personal and vocational concerns on the system. Prerequisites: PSYC 7050,7150, & 7255, 7256. (Formerly PSY 755 B)

**PSYC 7557. ASSESSMENT, THEORY & INTERVENTIONS IN SUPERVISION. (3)** Seventh course in the doctoral Advanced Psychological Foundations sequence. Theory, research, and assessment techniques related to providing supervision in treatment settings. Prerequisites: PSYC 7366 or 7466, PSYC 7555, 7556.

**PSYC 7558. SUPERVISION PRACTICUM (1).** Continuation of PSYC 7557. This course will provide intensive group supervision for the continued development of professional skills in the provision of clinical supervision at the individual level building upon the basic skills and knowledge developed in PSYC 7557. Theory, research, and assessment techniques related to providing individual-level supervision in treatment settings will be emphasized. Prerequisites: PSYC 7366, PSYC 7555, PSYC 7556, & PSYC 7557.

**PSYC 7559. ASSESSMENT, THEORY & INTERVENTIONS WITH MILITARY SERVICE MEMBERS AND FAMILIES (3).** Theory, research, and assessment techniques related to treatment of individual and families who are currently servicing the military or have done so in the past. The information includes the impact on personal concerns, interpersonal relationships, and vocational issues. Prerequisites: PSYC 7050 & 7150.

**PSYC 7710. PSYCHOEDUCATIONAL ASSESSMENT. (3)** The advanced study of the administration and interpretation of a battery of Psychoeducational assessment procedures with an emphasis on diagnostic testing, academic readiness, academic achievement and intellectual functioning. Emphasis will be based on an integrated view of the individual's Psychoeducational functioning. Prerequisite: PSYC 6170 or written permission of instructor prior to enrollment.

**PSYC 7730. QUALITATIVE RESEARCH. (3)** This course will focus on advanced qualitative methods and analysis specific to qualitative studies with research with diverse groups. Prerequisites: PSYC 7137.

**PSYC 7750. CAREER DEVELOPMENT: THEORIES, METHODS & CONTEMPORARY ISSUES (3).** This course will review the major theories of life long career choice development, and adjustment within the historical context of counseling psychology as well as contemporary issues in the career area. The major career assessment instruments and their applications to career counseling in multi-cultural settings, across the life span will be emphasized.

**PSYC 7760. TRAUMA & CRISIS INTERVENTIONS. (3)** Theory, research, and intervention associated with the nature, types, and models of trauma and crisis. This includes posttraumatic stress issues related to natural disasters, human-made emergencies, societal violence.

**PSYC 7790. INTERNSHIP PREPARATION SEMINAR. (3)** This elective seminar examines issues surrounding the pre-doctoral internship application and selection process. As a seminar, this course will have a "just-in-time" format allowing for discussion of topics relating to securing the capstone experience in an American Psychological Association approved internship and preparing to formally enter a career in professional psychology at the most timely point, the summer immediately prior to application for internship. Prerequisite: third year standing in the doctoral program in Psychology.

**PSYC 7900, 7901, 7902, 7903, 7904, 7905, 7906, 7907, 7908. SPECIAL TOPICS. (3)** Special topics in psychology are offered on an alternating basis. Prerequisite: PSYC 7136 or permission of instructor.

**PSYC 8095, 8096, 8097. INTERNSHIP (COUNSELING PSYCHOLOGY). (3-3-3).** The internship for Counseling Psychology students is a one year, full-time assignment under supervision to an agency approved by the student's program coordinator. It is the student's responsibility to apply for an internship and to enter the national process to obtain such an internship. It is recommended that students consult with their major advisor and program coordinator early on in the doctoral program to gain information regarding the process. The dissertation proposal must be successfully proposed prior to the submission of the first application for internship. Prerequisite: Permission of Counseling Psychology program coordinator one academic year in advance, completion of all coursework and doctoral comprehensive examinations.

**PSYC 8105, 8106, 8107. INTERNSHIP. (SCHOOL PSYCHOLOGY).** (3-3-3) The internship for School Psychology students is a one year, full-time assignment under supervision to an agency approved by the student's program coordinator. It is the student's responsibility to apply for an internship and to enter the national process to obtain such an internship. It is recommended that students consult with their major advisor and program coordinator early on in the doctoral program to gain information regarding the process. Prerequisite: Permission of appropriate program coordinator one academic year in advance, completion of all course work & doctoral comprehensive examinations.

**PSYC 8110. DISSERTATION. (3).** The design and implementation of an extensive and intensive study of psychological nature requiring the use of quantitative and/or qualitative competencies and skills under the direction of a committee and its chairperson. Students must enroll for a minimum of two semesters. Enrollment may not begin prior to the successful completion of comprehensive examinations and must be maintained each semester until the dissertation has been completed and successfully defended. The dissertation proposal must be successfully proposed prior to the submission of the first application for internship for Counseling Psychology Doctoral students.

## GRADUATE FACULTY

James Campbell, Associate Professor

B.A., 1982, Central State University; M.S., 1984, Oklahoma State University; Ph.D., 1991, Oklahoma State University

Lisa de la Mothe, Assistant Professor

B.S., 2001, University of Tennessee at Martin; M.A., 2006, Ph.D., 2008, Vanderbilt University

John Dossett, Associate Professor

B.S., 1990, M.A., 1995, Ball State University; Ph.D., 2000, University of Tennessee

Linda Guthrie, Professor

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

Marie S. Hammond, Associate Professor

B.M.E., 1978, Olivet College; M.A., 1980, Ph.D., 1999, University of Missouri

Kiesa Kelly, Associate Professor

B.A., 1996, Bowdoin College; M.S., 1999, Rosalind Franklin University of Medicine and Science; Ph.D., 2003, Rosalind Franklin University of Medicine and Science

Jeri Lee, Associate Professor

B.A., 1978, East Texas Baptist University; M.S., 1979, Texas Christian University; Ed. D., 1994, Tennessee State University, J.D., 2011, Nashville School of Law.

David Shen Miller, Associate Professor

B.A., 1994, University of Massachusetts-Amherst; M.S.W., 2002, University of Texas-Austin; Ph.D., 2008, University of Oregon

Robin Oatis-Ballew, Associate Professor

B.A., 1995, Fisk University; M.S., 1998, Howard University; Ph.D., 2001, Howard University.

Joan Popkin, Associate Professor

B.S., 1995, University of Tennessee; M.S., 1996, University of Tennessee; Ph.D., 2002, University of Tennessee

Mary Shelton, Associate Professor

B.S., 1975, University of the South; M.S., 1989, George Peabody College of Vanderbilt University; 1999, Ph.D., George Peabody College of Vanderbilt University.

Joshua Shive, Associate Professor

B.S., 2002, Truman State University; M.S., 2004, Ph.D., 2008, Purdue University

Stephen Trotter, Professor

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

Thurman Webb, Assistant Professor

B.S., 2000, Tennessee State University, M.S., 2006, Tennessee State University, Ed.D., 2011, Walden University

## DEPARTMENT OF TEACHING AND LEARNING

John D. Tiller, Ed.D., Interim Department Chair

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**DEGREE:** DOCTOR OF EDUCATION (Ed.D.)  
**MAJOR:** CURRICULUM AND INSTRUCTION  
**CONCENTRATIONS:**  
CURRICULUM PLANNING  
ELEMENTARY EDUCATION  
READING  
SECONDARY EDUCATION  
SPECIAL EDUCATION

The doctoral program offered by the Department of Teaching and Learning includes five concentrations: Curriculum Planning, Elementary Education, Reading, Secondary Education, and Special Education. These programs are designed for the in-service educator, prospective planner and programmer of curriculum, and prospective teacher educators and other education professionals. Prior graduate work and the applicant's interest and career aspirations will be considered in structuring the program of study for each applicant.

### Student Learning Outcomes:

Graduates will:

1. Demonstrate knowledge of the substantive foundations of curriculum and instruction.
2. Generate new knowledge through scholarly research and communication.
3. Develop leadership skills for program and professional development.
4. Possess knowledge and understanding for university level teaching and productivity.
5. Uphold the ethical standards, values, and attitudes of the education profession
6. Produce scholarly works that address current issues and problems of a social and educational consequence.

### Admission Requirements

1. A minimum Graduate Record Exam (GRE) score of 290 (Verbal & Quantitative), or a minimum Miller Analogies Test (MAT) score of 402, are required for admission.
2. A minimum G.P.A. of 3.25 is required on the last graduate degree, either Master's or Education Specialist. No more than thirty (30) semester hours from an Education Specialist degree may be used toward the doctorate. The doctoral program coordinator in consultation with the applicant's advisor will recommend the appropriate Education Specialist credits to be transferred.
3. An acceptable work experience record
4. Four (4) letters of recommendation indicating probable success in a doctoral program of study
5. Evidence of academic writing will be requested as part of the overall evaluation process
6. An acceptable interview

The admissions committee will review the applicant’s academic and professional record in making the admissions decision. Consideration will be given to: (a) previous graduate GPA, (b) GRE or MAT scores, (c) other factors as listed above. Applicants whose standardized test scores are below the expected minimums maybe considered for admission to these programs if: (1) the overall record indicates potential academic success in doctoral study, and (2) the applicant’s overall demeanor and persistence in academic rigor is judged to be comparable to that of the other applicants in the admissions cycle.

**General Department Requirements**

A minimum of sixty (60) semester hours of approved course work beyond the Master’s degree is required: eighteen (18) semester hours of general education core, twenty-four (24) semester hours of departmental core, twelve (12) hours of electives, and six (6) hours credit for the satisfactory completion of the doctoral dissertation. Also required is the successful completion of a written qualifying examination to be taken not earlier than 15 credit hours and not later than 18 credit hours , a written comprehensive examination including an oral defense prior to beginning the dissertation, and residency of a minimum of eighteen (18) semester hours over a period of four (4) semesters. Candidates that have an Ed.S. will take the qualifying exam not earlier than an additional nine (9) credit hours of study but not later than an additional 18 credit hours of study.

**PROGRAM OF STUDY**

**General Education Core, All Concentrations, 18 hours**

EDCI 6300	Multicultural Education	3
EDCI 7000	Foundations of Education	3
EDCI 7120	Advanced Methods of Research	3
EDAD 7040	Leadership and Interpersonal Relationships	3
EDCI 7450	Learning Theories for Teachers	3
EDAD 7180	Statistical Analysis in Educational Leadership	3

(EDAD 6000 is a prerequisite for EDAD 7180.)

**CONCENTRATION I: CURRICULUM PLANNING**

**Specialized Courses - 24 hours (other courses with consent of advisor)**

EDCI 6100	Curriculum Planning and Programming	3
EDCI 6130	Seminar in Curriculum Design	3
EDCI 6150	Seminar in Curriculum Development	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 6190	Microcomputers and Educational Services	3
EDCI 6200	Instructional Applications of Word-Processing	3
EDCI 7020	Doctoral Seminar in Curriculum	3
EDCI 7030	Independent Study	3
EDCI 7080	Curriculum Theory	3
EDCI 7110	Seminar in Instruction	3
EDCI 7140	Principles of Teaching	3
EDCI 7870	Elementary and Secondary Curriculum	3

**Electives - 12 hours** (Electives must be taken outside of the candidate’s major field. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100).

**Dissertation - 6 to 15 hours**

EDCI 8100 Doctoral Dissertation  
Once candidates begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, candidates may register in the “EDCI-8100 Doctoral Dissertation Section 35” at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of four consecutive semesters.

**\* CONCENTRATION II: ELEMENTARY EDUCATION**

**Specialized Courses - 24 hours (other courses with consent of advisor)**

EDCI 6100	Curriculum Planning and Programming	3
EDCI 6130	Seminar in Curriculum Design	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 6280	Designing Middle School Curriculum	3
EDCI 6290	Advanced Language Arts	3
EDCI 6340	Evaluation of Education Programs	3
EDCI 6820	Advanced Mathematics in the Elementary School	3
EDCI 6830	Advanced Science in the Elementary School	3
	OR	
EDCI 6820	Advanced Social Studies	3
EDCI 7030	Independent Study	3
EDCI 7080	Curriculum Theory	3
EDCI 7870	The Elementary and Secondary Curriculum	3
PSYC 6130	Social Bases of Behavior	3

**Electives - 12 hours** (Electives must be taken outside of the candidate’s major field. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

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

**Dissertation - 6 to 15 hours**

EDCI 8100 Doctoral Dissertation  
Once candidates begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, candidates may register in the “EDCI-8100 Doctoral Dissertation 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 the Ed.D. degree in Curriculum and Instruction with a Concentration in Reading must have successfully completed the Master of Education degree in Reading.

**Specialized Courses:** 24 hours - Curriculum Instruction and 12 hours; - Reading Education – 12 hours beyond the requirements for certification as a reading specialist.

**A. Curriculum and Instruction - 12 hours**

EDAD 6160	The Elementary School Principal	3
EDAD 6200	Organization and Administration of the Secondary School	3
EDCI 6180	Microcomputer Technology in Primary and Elementary Schools	3
EDCI 7040	Comparative Education	3
EDCI 7080	Curriculum Theory	3

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

EDRD 5800	Linguistic Applications to Teaching Language Arts	3
EDRD 5870	Interpreting Research Findings Into Classroom Practice	3
EDRD 6200	Directed Individual Study of Instructional Strategies in Reading	1-3
EDRD 6210	Directed Individual Study in Supervising (A,B,& C)Reading Instruction and/or Programs (can be repeated)	1-3
EDRD 6220	Directed Individual Study of Individualized (A,B,& C)Clinical Procedures	1-3
EDRD 6500	Investigating Reading and Writing Processes	3
EDRD 7100	Internship in Supervision of Reading(A,B,& C)Instruction and/or Programs	1-3

**Electives** - 12 hours (Electives must be taken outside of the candidates’ major field. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

**Dissertation** - 6 to 15 hours

EDCI 8100            Doctoral Dissertation  
Once candidates begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, candidates may register in the “EDCI-8100 Doctoral Dissertation Section 35” at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of three consecutive semesters.

Candidates pursuing this Concentration may be preparing for the following positions:

- Classroom Teachers
- Curriculum Planners
- Educational Administrators
- Elementary Supervisors
- Guidance Counselors
- Guidance Directors
- School Psychologists
- Secondary Remedial/Clinical Specialists.

**CONCENTRATION IV: SECONDARY EDUCATION**

**Specialized Courses** - 24 hours (other courses with consent of advisor)

EDCI 6100	Curriculum and Planning and Programming	3
EDCI 6130	Seminar in Curriculum Design	3
EDCI 6190	Microcomputers and Educational Services	3
EDCI 6200	Instructional Applications of Word-Processing	3
EDCI 6290	Advanced Language Arts	3
EDCI 6340	Evaluation of Education Programs	3
EDCI 7020	Doctoral Seminar in Curriculum	3
EDCI 7030	Independent Study	3
EDCI 7080	Curriculum Theory	3
EDCI 7110	Seminar Instruction	3
EDCI 7140	Principles of Teaching	3

**Electives** - 12 hours (taken outside the department. It is suggested that EDAD 700 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

**Dissertation** - 6 to 15 hours

EDCI 8100            Doctoral Dissertation

Once candidates begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, candidates may register in the “EDCI-8100 Doctoral Dissertation 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)**

EDCI 6100	Curriculum Planning	3
EDCI 6130	Seminar in Curriculum	3
EDCI 7080	Curriculum Theory	3
EDCI 7020	Doctoral Seminar in Curriculum	3
EDCI 7030	Doctoral Independent Study	3
EDCI 7110	Seminar in Instruction	3

**B. Special Education - (12 Hours)**

EDSE 5100	Multicultural/Bilingual Exceptional Student	3
EDSE 5700	Curriculum, Methods, and Materials for Multicultural/Bilingual Special Education	3
EDSE 5730/6730	Assessment of Exceptional Multicultural/ Bilingual Population	3
EDSE 5810/6810	Cultural Pluralism & Language Disorders	3
EDSE 5820/6820	Cultural Diversity & Behavior Disorders	3
EDSE 6370	Characteristics and Strategies for the Physically Challenged	3
EDSE 6520	Org./Admin. Of Program and Services For the Disabled	3
EDSE 6530	Education and Psychology of Exceptional Child	3
EDSE 6540	Theory and Procedures for Teaching the Exceptional Child	3
EDSE 6560	Psycho-educational Diagnosis of the Exceptional Child	3

EDSE 6570	Consultation and Collaboration	3
EDSE 6580	Learning and Behavioral Disabilities	3
EDSE 6590	Characteristics and Needs of the Gifted	3
EDSE 6600	Teaching the Gifted	3
EDSE 6630	Teaching Early Childhood Special Education	3
EDSE 6900	Practicum in Special Education	3
EDSE 6910	Problems and Projects in Special Education	3
EDSE 6920	Problems and Projects in Special Education	3
EDSE 6930	Problems and Projects in Special Education	3
EDSE 7915	Seminar in Special Education/ Selected Topics	3
EDSE 7916	Seminar in Special Education/ Selected Topics	3
EDSE 7917	Seminar in Special Education/ Selected Topics	3
EDSE 7918	Seminar in Special Education Selected Topics	3

**Electives - 12 hours** (taken outside the department. It is suggested that EDAD 7000 be taken immediately prior to or during the first semester of enrollment in EDCI 8100.)

**Dissertation - 6 to 15 hours**

EDCI 8100            Doctoral Dissertation

Once candidates begin the dissertation, they must register for EDCI 8100 every semester until the dissertation is complete. After the fifth registration, candidates may register in the "EDCI-8100 Doctoral Dissertation Section 35" at a reduced fee.

Residency is satisfied with a minimum of eighteen (18) semester hours over a period of four consecutive semesters.

### **DEGREE: MASTER OF EDUCATION (M.Ed.)**

The Master of Education program provides advanced study to certified teachers\* or teacher candidates who have completed a bachelor's degree. The program builds on the College of Education's conceptual framework, to prepare educators to become competent and caring professionals who are able to work effectively with diverse populations.

\*Licensed or certified in the State of Tennessee or a United States equivalent.

Specifically, the goals are to provide advanced study in the following areas:

#### **• Curriculum and Instruction**

##### Concentrations

- Curriculum Planning (licensed teachers only)
- Educational Technology (non-licensure option)
- Music (non-licensure option)
- Reading Specialist (endorsement only)
- Secondary School Instruction (includes Music Education)
- Teaching English Language Learners (endorsement or non-licensure option)

#### **• Elementary Education**

#### **• Special Education**

Concentration

- Mild/Moderate

#### **• Advanced Studies in Teaching and Learning**

#### **Student Learning Outcomes:**

Graduates will:

1. Become reflective, caring, competent, and culturally responsive practitioners who are able to work with diverse populations using research based interventions.
2. Generate new knowledge through scholarly research and communication.
3. Apply relevant theory, philosophy, research, policies, legislation, and best practice to their professional goals.
4. Demonstrate growth in knowledge of content, differentiated interventions, and developmentally appropriate pedagogy.
5. Become collaborators with learners, parents, the community, and other professionals.
6. Uphold the ethical standards, values, and attitudes of the education profession

### **MAJOR: CURRICULUM AND INSTRUCTION**

#### **Admission Requirements**

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and satisfactory scores on the Graduate Record Examination (GRE) or Millers Analogies (MAT). The GRE or MAT result is used in the evaluation of the academic qualifications of all graduate applicants. \*Note: International students must meet admissions requirements to be accepted into Department programs.

Applicants should refer to the follow ranges to determine the minimum score, based on their GPA of record:

GPA of 2.5 or higher	MAT – 370	GRE – 290
GPA of 2.25 – 2.49	MAT – 383	GRE – 293
GPA of 2.0 – 2.24	MAT – 394	GRE – 297

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher based on the above weightings. 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 will result in withdrawal from the program. A student with a lower GRE/MAT score does not qualify for conditional admission regardless of a GPA of 2.5 or higher.

Admissions to teacher education programs at the graduate level may require additional evidence of academic performance (higher GPA,

other test scores.) Applicants who are also seeking initial teaching license should contact the Office of Teacher Education and Student Services for current requirements.

Applicants who are potential candidates for the Master's Degree in Curriculum and Instruction must be certified to teach or must meet certification (initial licensure) before the degree is awarded. Exceptions are the concentrations in Educational Technology, Music, and candidates for Teaching English Language Learners (ELL) non-licensure option.

### Degree Requirements for Licensure Option

The Master's Degree program in Curriculum and Instruction offers a concentrations in Secondary School Instruction and Teaching English Language Learners with certification and initial licensure. This includes all single subjects taught in grades 7-12 and those subjects certified for grades K-12. For certification, candidates must complete the 33-hours of course work plus 12 hours in the semester of student teaching, submit the edTPA portfolio and receiving a passing score, and pass comprehensive and pass all required Praxis exams.

### Degree Requirements for Non-Licensure Options

The Master's Degree program in Curriculum and Instruction offers concentrations in Educational Technology, Music, and Teaching English Language Learners. Candidates must complete the 33-hours of course work and pass comprehensive exams. Candidates for the concentration in music must have an undergraduate degree (B.A. or B.S.) in Music as a pre-requisite (not the initial licensure program). The degree is completed by conducting project writing.

### Degree Requirements for Advanced Degree and Endorsements

The Master's Degree program in Curriculum and Instruction offers concentrations in Curriculum Planning, Reading Specialist, and Teaching English Language Learners. Candidates must complete the 33-hours of course work, pass comprehensive exams, and pass all required Praxis exams. Curriculum Planning candidates will conduct action research in his/her classroom in lieu of the comprehensive exams.

### PROGRAMS OF STUDY

#### Required Core - 15 hours

EDCI 5000	Foundations of Education	3
	or	
EDCI 5260	Philosophy of Education	3
EDCI 5110	Research and Statistics in Education	3
EDCI 6100	Curriculum and Planning and Programming	3
EDCI 5300	Multicultural Education	3
PSYC 5430	Advanced Educational Psychology	3

#### CONCENTRATION: CURRICULUM PLANNING –18 HRS

This concentration is restricted to already licensed U.S. teachers who are currently serving full time in the K-12 schools. Program of study guided by Professional Development Plan submitted in EDCI 5260 Philosophy of Education during the first semester of enrollment.

EDCI 5110 Research and Statistics in Education should be taken in the next to last academic semester prior to graduation. Candidates carry out their action research in their own classroom and submit a full written research report for evaluation. Presentation and oral defense of findings (Pass/Fail) will serve as end of program assessment, in lieu of comprehensive examination.

#### Concentration Courses – 9 hours

EDCI 5340	Evaluation of Education Programs	3
EDCI 5860	Values Education	3
EDCI 5910	Problems and Projects in Education	3

#### Guided Electives – 9 hours (based on area of interest and in consultation with the advisor)

#### CONCENTRATION: EDUCATIONAL TECHNOLOGY - 18 hours

##### Concentration Required Courses – 12 hours

EDCI 5730	Audio Visual Education	3
EDCI 6180	Microcomputers for Primary & Elementary Schools	3
EDCI 6190	Microcomputers and Educational Services	3
EDCI 5910	Problems and Projects in Education	3
	Guided Electives (6 hours)	

**Guided Electives (6 hours)** 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: MUSIC - 18 hours

##### A. Concentration (12 hours)

##### Concentration Core (9 hours)

MUSC 5000	Introduction to Graduate Study in Music	3
MUSC 5320	Survey and Pedagogy of Music Theory	3
MUSC 6020	Project Writing*	3

\*The project involves research or direct application activity in music education, under the direction of a project advisor. A written project document in standard academic format is required as supporting evidence of the project activity.

##### Concentration (3 hours): Choose one course

MUSC 5510	Applied Music (repeatable)	1
MUSC 5010	Advanced Vocal Methods	3
MUSC 5100	Instrumental Methods and Materials	3
MUSC 5270	Supervision of School Music	3
MUSC 5250**	Foundation of Music Education	3

\*\*strongly recommended

##### B. Guided Electives in Music (6 hours)

##### Music Theory (3 hours): Choose one course

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

##### Music History (3 hours): Choose one course

MUSC 5070	The Symphony	3
MUSC 5080	The Opera	3

MUSC 5090	Twentieth Century Music	3
MUSC 5525	Special Topics	3

A non-license program for those seeking an advanced degree in Music (the utilization of 21<sup>st</sup> skills and methodologies). This is not the program for individuals seeking an initial licensure in Music Education. Those individuals should apply for the M.Ed. in Curriculum and Instruction, Secondary School Instruction (Music, K-12).

**CONCENTRATION: READING - 18 hours**

The M.Ed. in Curriculum and Instruction with a concentration in Reading is designed for currently licensed teachers seeking an advanced degree in Reading. Candidates who complete this concentration are eligible to apply for Reading Specialist certification. For Reading Specialist certification candidates must have minimum of 18 hours of Reading courses, a minimum of three years classroom teaching experience, and pass the Reading Specialist Praxis. Prerequisite: Admission to the Graduate School and initial teacher certification (if seeking Reading Specialist certification).

Concentration: Reading 18 Hours

EDRD 5610	The Teaching of Reading in Grades K-8	3
EDRD 5640	Diagnosis and Treatment of Reading Disabilities	3
EDRD 5690	Practicum in Reading Education	3
EDRD 5800	Linguistic Applications to Teaching Language Arts	3
EDRD 6030	Reading-Language Arts Curriculum in Elementary, Middle, and Secondary Schools	3
EDRD 6050	Strategies for Developing Reading-Study Skills in Middle and Secondary Schools	3
EDRD 6120	Current Trends and Issues in Reading-Language Arts Education	3
EDRD 6200	Directed Individual Study of Instructional Strategies in Reading	1-3

**CONCENTRATION: SECONDARY SCHOOL INSTRUCTION**

- 18 suggested hours (courses other than those listed below may be taken with consent of the advisor)

Concentration Courses – 12 hours

PSYC 5330	Assessment and Evaluation	3
EDSE 5530	Education and Psychology of Exceptional Children	3
EDCI 6190	Microcomputers in Educational Services	3
EDCI 5840	Classroom Behavior Management	3

Licensure Courses – 6 hours (candidate must be admitted to Teacher Education program)

EDRD 6050	Strategy for Developing Reading	3
EDCI 5715	Advanced Methods of Teaching Secondary Teachers	3

Candidates must successfully pass the required PRAXIS II for the specialized area; in addition to the Principles of Learning and Teaching (PLT). Candidates are required to complete a residency (student teaching) field experience in the middle/secondary school setting. \*The master’s degree cannot be awarded until licensure requirements are fulfilled.

Student Teaching for Initial Licensure – 12 hours beyond course work

EDCI 4705	Educational Seminar	3
EDCI 4720	Student Teaching in the Elementary School	9

**CONCENTRATION: TEACHING ENGLISH LANGUAGE LEARNERS (ELL) 18-hours**

EDCI 5010	Issues in Bilingual Education & Second Language Acquisition	3
EDCI 5020	Teaching English Structure to Non-Native Speakers of English	3
EDCI 5030	Teaching and Assessment of Non-Native Speakers of English	3
EDRD 5800	Linguistics Applications to Teaching Language Arts	3
ENGL 5130	Teaching English to Speakers of Another Language, I	3
ENGL 5140	Teaching English to Speakers of Another Language, II	3

Candidates seeking licensure in ELL must successfully pass the required Praxis II for the specialized area; in addition to the Principles of Learning and Teaching (PLT). Candidates are required to complete a residency (student teaching including the edTPA portfolio) field experience in the middle/secondary school setting. The master’s degree cannot be awarded until licensure requirements are fulfilled for declared licensure candidates.

**Student Teaching for Initial Licensure – 12 hours beyond course work**

EDCI 4705	Educational Seminar	3
EDCI 4720	Student Teaching in the Elementary School	9

**MAJOR: ELEMENTARY EDUCATION**

**Admission Requirements**

Unconditional admission to the program requires the applicant to have a bachelor’s degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and satisfactory scores on the Graduate Record Examination (GRE) or Millers Analogies (MAT). The GRE or MAT result is used in the evaluation of the academic qualifications of all graduate applicants. \*Note: International students must meet all admissions requirements to be accepted into Department programs.

Applicants should refer to the follow ranges to determine the minimum score, based on their GPA of record:

GPA of 2.5 or higher	MAT – 370	GRE – 290
GPA of 2.25 – 2.49	MAT – 383	GRE – 293
GPA of 2.0 – 2.24	MAT – 394	GRE – 297

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher based on the above weightings. 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 fulfilling required score on graduate exam (GRE or MAT) and earning at least a B (3.0) average in the first nine hours of graduate courses. Failure to achieve this will result in withdrawal from the program. A student with a lower GRE/MAT score does not qualify for conditional admission regardless of a GPA of 2.5 or higher.

Admissions to teacher education programs at the graduate level may require additional evidence of academic performance (higher GPA, other test scores). Applicants who are seeking initial teaching license should contact the Office of Teacher Education and Student Services for current requirements.

Applicants who are potential candidates for the Master's Degree Elementary Education must be certified to teach or must meet certification (initial licensure) before the degree is awarded.

### Degree Requirements

Candidates for the Master of Education degree, and initial certification, must take a minimum of 36-semester hours of course work. Candidates for the Master of Education degree who are adding elementary to an existing endorsement must complete a minimum of 33 semester hours of course work. Both candidates must successfully pass comprehensive examinations in the fields of general education and elementary education. A two-part comprehensive examination is required to complete the degree. The first part is an examination that covers the general core courses and the second part is a subject/discipline specific examination.

### PROGRAM OF STUDY

Professional Education Required Course – 12 hours		
EDCI 5000	Foundations of Education	3
EDCI 5110	Research and Statistics in Education	3
PSYC 5430	Advanced Educational Psychology	3
EDCI 5300	Multicultural Education	3

Concentration Course – 12 hours		
PSYC 5330	Assessment and Evaluation	3
EDSE 5530	Education and Psychology of Exceptional Children	3
EDCI 6180	Microcomputers in Primary and Elementary Settings	3
EDCI 5840	Classroom Behavior Management	3

Licensure Courses – 12 hours (candidate must be admitted to Teacher Education program)

EDRD 5610	The Teaching of Reading (K-8)	3
EDCI 5820	Advanced Mathematics in Elementary School	3
EDCI 5290	Advanced Language Arts	3
EDCI 5270	Advanced Social Studies	3
OR		
EDCI 5830	Advanced Science in Elementary School	3

Those seeking initial licensure must have a transcript analysis done by the Office of Teacher Education and Student Services, and must be admitted to Teacher Education before enrolling in the following courses. Candidates must successfully pass the required PRAXIS II for the specialized area; in addition to the Principles of Learning and Teaching (PLT). Candidates are required to complete a residency (student teaching) field experience in the middle/secondary school setting. \*The master's degree cannot be awarded until licensure requirements are fulfilled.

Candidates are required to complete a residency (student teaching) field experience in an elementary setting. All course work and PRAXIS exams must be completed before enrolling for the final two courses in the last semester.

Student Teaching for Initial Licensure – 12 hours beyond course work

EDCI 4706	Educational Seminar	3
EDCI 4720	Student Teaching in the Elementary School	9

### MAJOR: SPECIAL EDUCATION

The Special Education program provides candidates with courses and experiences designed to prepare competent professionals/facilitators of learning with a multicultural perspective to serve in various educational capacities. Graduates are prepared to serve as classroom teachers, and to serve as professionals employed by hospitals, group homes, mental health centers, and other community service agencies, both public and private, serving individuals with disabilities.

### Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and satisfactory scores on the Graduate Record Examination (GRE) or Millers Analogies (MAT). The GRE or MAT result is used in the evaluation of the academic qualifications of all graduate applicants. \*Note: International students must meet all admissions requirements to be accepted into Department programs.

Applicants should refer to the follow ranges to determine the minimum score, based on their GPA of record:

GPA of 2.5 or higher	MAT – 370	GRE – 290
GPA of 2.25 – 2.49	MAT – 383	GRE – 293
GPA of 2.0 – 2.24	MAT – 394	GRE – 297

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher based on the above weightings. 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 fulfilling required score on graduate exam (GRE or MAT) and earning at least a B (3.0) average in the first nine hours of graduate courses. Failure to achieve this will result in withdrawal from the program. A student with a lower GRE/MAT score does not qualify for conditional admission regardless of a GPA of 2.5 or higher.

Admissions to teacher education programs at the graduate level may require additional evidence of academic performance (higher GPA, other test scores). Applicants who are seeking initial teaching license should contact the Office of Teacher Education and Student Services for current requirements.

Applicants who are potential candidates for the Master’s Degree Special Education must be certified to teach or must meet certification (initial licensure) before the degree is awarded.

**Degree Requirements**

Candidates for the Master of Special Education degree, and initial certification, must take a minimum of 36 semester hours of course work. Candidates for the Master of Special Education degree who are adding certification to an existing license must complete a minimum of 33 semester hours of course work. Both candidates must successfully pass a two-part comprehensive examination is required to complete the degree. The first part is an examination that covers the general core courses and the second part is a subject/discipline specific examination.

**Program of Study**

Candidates in the M.Ed. degree in Special Education must complete 36 semester hours and pass comprehensive examinations in general education and special education. Candidates take the 9 hours required from the professional core and choose 27 additional hours in Special Education. Candidates intending to be licensed to teach special education should select courses from those required for licensure, and must complete 9 hours supervised student teaching.

Candidates seeking initial teacher licensure must satisfy requirements for admission to Teacher Education before enrolling in the final semester of student teaching where 12 semester hours of course work are completed including edTPA portfolio.

The master’s degree cannot be awarded until licensure requirements are fulfilled.

**Required Professional Education Core - 9 hours**

EDCI 5000	Foundations of Education	3
EDSE 5530	Education and Psychology of Exceptional Children	3
EDCI 5110	Research and Statistics in Education	3

**Specialized Core Courses Required for Initial Licensure—27 hours**

The Post-Baccalaureate Curriculum is for those who do not hold a valid professional Tennessee teaching license. Those seeking initial licensure must have a transcript analysis done by the Office of Teacher Education, and must be admitted to Teacher Education before enrolling in the following courses.

EDSE 5540	Theory and Procedures for Teaching Exceptional Children	3
EDSE 5560	Psycho-Educational Diagnosis of the Exceptional Child	3
EDSE 5570	Consultation and Collaboration	3
EDSE 5580	Learning and Behavioral Disabilities	3
EDSE 5640	Managing Inappropriate Classroom Behavior	3
EDSE 5680	Teaching Academics to the Mildly Disabled	3
EDSE 5690	Managing Transitions of Exceptional Persons	3

EDSE 5800	Technology in Special Education and Rehabilitation	3
EDRD 5610	Teaching Reading in Elementary School	3
OR		
EDRD 6050	Strategy for Developing Reading	3

**Certification:** Candidates must successfully pass all of the required Praxis examinations for Special Education including the Principles of Learning and Teaching (PLT). Candidates are required to complete a residency (student teaching including the edTPA portfolio) field experience in an exceptional setting. All course work and Praxis Exams must be completed before enrolling for the final two courses in the last semester.

EDCI 4705	Educational Seminar	3
EDSE 5950	Student Teaching in Special Education	9

(must be taken concurrently with EDCI 4705)

With the 9 hours from the required professional core above, and 27 hours from the specialized core, the credit hour requirement for the master’s degree and initial certification are met. Option A is for those who are licensed in another area and wish to add special education to the license.

A. The 21-hour Endorsement Curriculum is only for persons adding Special Education Modified K-12 to an existing Tennessee professional teaching license.

EDSE 5530	Education and Psychology of Exceptional Children	3
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**NOTE:** Not required of students certified to teach.

EDSE 5540	Theory and Procedures for Teaching Exceptional Children	3
EDSE 5560	Psycho-Educational Diagnosis of the Exceptional Child	3
EDSE 5570	Consultation and Collaboration	3
EDSE 5580	Learning and Behavior Disabilities	3
EDSE 5640	Managing Inappropriate Classroom Behavior	3
EDSE 5680	Teaching Academics to the Mildly Disabled	3
EDSE 5690	Managing Transitions of Exceptional Persons	3
EDSE 5800	Technology in Special Education and Rehabilitation	3
EDRD 5610	Teaching Reading in Elementary School	3
OR		
EDRD 6050	Strategy for Developing Reading	3

**NOTE:** reading courses not required if already certified

\*EDSE 5950 Student Teaching  
 (\*EDCI 4705 or 4706 must be taken concurrently with this course.)

**MAJOR:           ADVANCED STUDIES IN  
TEACHING AND LEARNING**

The mission of this Regents Online Degree Program (RODP) Master's Degree program in Education is to provide advanced professional preparation in the area of reading and language arts for licensed practicing teachers. Further, this entirely online program is based on the assumption that all course content and learning experiences will be based on the student's work as a classroom teacher. All courses include assignments that teachers carry out in their own classrooms.

The RODP Master's Degree program is aligned with National Board for Professional Teaching Standards (NBPTS) core propositions. The program is built around a core of proficiencies that are consistent across most National Board for Professional Teaching Standards certificates. In addition, it includes coursework focused on pedagogical content proficiencies related to teaching Reading—Language Arts. This design allows teachers to receive advanced professional preparation consistent with NBPTS principles and is supportive of achieving NBPTS certification in Early and Middle Childhood/Literacy: Reading—Language Arts. Since the core is aligned with NBPTS generalist certificates, this program also supports teachers who seek NBPTS certification in any of the generalist areas as well. This design is flexible in that it allows other NBPTS certification areas to be included by changing the pedagogical content focus.

For more information about this program, refer to the RODP Web site at [www.tn.regentsdegrees.org](http://www.tn.regentsdegrees.org).

**Admission Requirements**

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative grade point average of 2.5 or better on a 4.0 scale, and satisfactory scores on the Graduate Record Examination (GRE) or Millers Analogies (MAT). The GRE or MAT result is used in the evaluation of the academic qualifications of all graduate applicants. \*Note: International students must meet fulfill admissions requirements to be accepted into Department programs.

Applicants should refer to the follow ranges to determine the minimum score, based on their GPA of record:

GPA of 2.5 or higher	MAT – 370	GRE – 290
GPA of 2.25 – 2.49	MAT – 383	GRE – 293
GPA of 2.0 – 2.24	MAT – 394	GRE – 297

Conditional admission may be gained with a lower grade point average, but the GRE or MAT score must be correspondingly higher based on the above weightings. 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 fulfilling required score on graduate exam (GRE or MAT) and earning at least a B (3.0) average in the first nine hours of graduate courses. Failure to achieve this will result in withdrawal from the program. A student with a lower GRE/MAT score does not qualify for conditional admission regardless of a GPA of 2.5 or higher.

**Degree Requirements**

Candidates for the Master in Advanced Studies in Teaching and Learning degree, and initial certification, must take a minimum of thirty-six (36) semester hours of course work. Candidates must successfully complete a capstone, action research project.

**COURSE DESCRIPTIONS**

**EDCI 5000. FOUNDATIONS OF EDUCATION. (3)** An introduction to professional education for post baccalaureate licensure students. Includes a critical analysis of sociological, psychological, and philosophical foundations of education.

**EDCI 5010. ISSUES IN BILINGUAL EDUCATION AND SECOND LANGUAGE ACQUISITION. (3)** Current research on bilingual education, language development, and second-language acquisition from the fields of sociolinguistics and psycholinguistics. Emphasis on factors affecting development of skills in English as a second or foreign language.

**EDCI 5020. TEACHING ENGLISH STRUCTURE TO NON-NATIVE SPEAKERS OF ENGLISH. (3)** Advanced aspects of English grammar for teachers of English as a second or foreign language. Emphasis on comparative analysis of English grammatical structure, problems encountered by non-native speakers in learning English grammar, and methods for addressing these difficulties.

**EDCI 5030. TESTING AND ASSESSMENT OF NON-NATIVE SPEAKERS OF ENGLISH. (3)** Linguistic, cultural, educational, legal, and logistical aspects of assessing the educational needs of non-native speakers of English. Emphasis on culturally-sensitive, legally-defensible, and pedagogically-sound assessment and evaluation techniques.

**EDCI 5110. RESEARCH AND STATISTICS IN EDUCATION. (3)** A course designed to introduce the student to different methods of conducting research, as well as to educate the student in planning an original piece of research and developing a proposal for the research. A critical analysis is made of various types of research. The writing style is guided by the manual adopted by the College of Education. Elementary statistics, analysis, and interpretation of data are included.

**EDCI 5260. PHILOSOPHY OF EDUCATION. (3)** A critical examination of the purpose of education in our elementary and secondary schools and the bearing of this purpose on problems of organization and administration, the selection of subject matter, and classroom practice. Consideration will be given to the significance of our education purpose and practice to our concept of a democratic society.

**EDCI 5270/6270. ADVANCED SOCIAL STUDIES. (3)** Designed for candidates who desire to explore newer practices and materials for the social studies program in elementary schools.

**EDCI 5280/6280. DESIGNING MIDDLE SCHOOL CURRICULUM. (3)** Focused on school programs that are responsive to and effective for learners in the early adolescent (11-15 years) range. Organization, evaluation, curricula, and processes for Implementation. For teachers, administrators, counselors, supervisors, and curriculum directors.

**EDCI 5290/6290. ADVANCED LANGUAGE ARTS. (3)** A study of current trends and practices in teaching the language arts in elementary.

**EDCI 5300/6300. MULTICULTURAL EDUCATION. (3)** The course is designed to aid educators in becoming aware of, understanding and being sensitive to the needs and interests of ethnic and cultural groups, the underlying philosophy being that the differences and similarities that characterize individuals and groups should be cherished for their worth and cultivated for the benefits they bring all people.

**EDCI 5310. IN-SERVICE EDUCATION WORKSHOPS. (3)** This course is designed to provide in-service personnel with opportunities to make an in-depth study of some area or a combination of areas involving contemporary problems and issues in education. This course is primarily designed to be concentrated into short periods of time for intensive study. Some of the areas covered are developing instructional modules, urban education, dealing with exceptional learners in the classroom, instructional media, etc. (Does not count toward a degree, but the credits are acceptable by the State Department of Education for certificate renewal and a 30 plus program beyond a master's degree)

**EDCI 5315. OBSERVATION (3).** This course is designed to meet observational requirements mandated by the National Council on Teacher Education (NCATE). Enrollment in this course and the observations in public school classrooms stipulated for candidates seeking initial licensure meet this requirement.

**EDCI 5340/6340. EVALUATION OF EDUCATION PROGRAMS. (3)** An examination of the development, interpretation, and use of standardized criterion references, and other procedures and instruments for appraising individual and group progress, including processes for evaluating the total school program, including personnel and facilities. Designed for curriculum and supervisory candidates to acquire knowledge of various program evaluation approaches, experience applying selected existing models, conceptualize new instrumentation for unique programmatic concerns, and practice data collection, organization, analysis, and presentation.

**EDCI 5350. INTERNSHIP IN SECONDARY SCHOOL. (3-9)** Designed for those candidates seeking licensure but are already teaching in a State-approved K-12 school. Prerequisite: Passing scores on the Praxis II examinations.

**EDCI 5360. INTERNSHIP IN ELEMENTARY SCHOOL. (3-9)** Post-baccalaureate candidates teaching in a State approved elementary school on an alternative license may enroll in this course in lieu of student teaching. Prerequisite: Passing scores on the Praxis II examinations.

**EDCI 5610/20/30 EDCI 5610, 5620, 5630. ALTERNATE LICENSE SEMINAR I, II, III.** This seminar is designed to enhance the Tennessee state mandated mentoring program required for all teachers serving as Teacher of Record on an alternative license. The curriculum will be student driven with a wide variety of topics and themes to address the myriad of needs, issues, and challenges encountered by first and second year teachers. The course content for the seminars is built around the ten INTASC Standards. Prerequisite: Intent to Hire statement from school system and enrollment in TSU alternative license program.

**EDCI 5715. ADVANCED METHODS OF TEACHING FOR SECONDARY TEACHERS. (3)** Designed for candidates with a desire to explore practices and materials for programs in secondary school instruction.

**EDCI 5730. AUDIOVISUAL EDUCATION. (3)** Analysis of the development and function of audio-visual programs in schools. Includes problems of organization, selection, and utilization of materials and equipment, unit costs, and school plant requirements. Some laboratory experience is required.

**EDCI 5820/6820. ADVANCED MATHEMATICS IN THE ELEMENTARY SCHOOL. (3)** Current developments and practices in teaching elementary mathematics. Emphasis is given to instructional and assessment methods that enable teachers to work with students' abilities in order to build a foundation for increasing their understanding of mathematics for future academic success and college and career readiness. The course content is aligned with recommendations by the National Council for Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics and the adopted state standards for Mathematics.

**EDCI 5830/6830. ADVANCED SCIENCE IN THE ELEMENTARY SCHOOL. (3).** Current developments and practices in teaching elementary science. Emphasis is placed on examination of curriculum materials, developmental activities, research, and involvement in learning experiences appropriate for the elementary school. The course content is aligned with the Next Generation Science Standards. The course content is aligned with the adopted state standards for Science. Emphasis in the course is placed on the content and instructional strategies in teaching elementary science.

**EDCI 5840 CLASSROOM MANAGEMENT: CREATING A COMMUNITY OF LEARNERS (3).** This course presents diverse management strategies to establish a productive learning community for students. The course will also examine the importance of creating a physical and social environment that supports creativity, critical thinking, problem solving, and collaboration. A ten hour, focused K-8 field experience is required.

**EDCI 5860/6860. VALUES EDUCATION. (3)** A course designed for classroom teachers that emphasize teaching strategies, methods, and techniques of the three approaches to values education: 1. Analysis, 2. Clarification, and 3. Cognitive Moral Development of Values Education.

**EDCI 5910, 5920, 5930. PROBLEMS AND PROJECTS IN EDUCATION. (3)** Candidates may register for one-to-three special projects in education under the direction of an appropriate member of the College.

**EDCI 5950. SEMINAR IN MULTICULTURAL EDUCATION. (3)** A study of concerns and problems related to the education of culturally different and educationally neglected learners from the major ethnic and racial groups in the United States; the administrative and supervisory facets of these concerns, and problems and modification in curriculum necessary in the development of supportive programs.

**EDCI 6100. CURRICULUM PLANNING AND PROGRAMMING. (3)** An examination of the factors which determine curriculum, the meaning of curriculum, the involvement of learners in the process of developing a clearer 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. (Formerly EDCI 610)

**EDCI 6130. SEMINAR IN CURRICULUM DESIGN. (3)** An examination of the skills and understandings related to designing, constructing, and improving the curriculum. Utilizing problem-solving approaches, the effective procedures and practices used by persons in curriculum leadership positions are explored and experienced. (Formerly EDCI 613)

**EDCI 6150. SEMINAR IN CURRICULUM DEVELOPMENT. (3)** Seminars designed to provide in-depth exploration of specific topics, current issues, and trends of significant value to graduate candidates in their professional development.

**EDCI 6180. MICROCOMPUTER TECHNOLOGY IN PRIMARY AND ELEMENTARY SCHOOLS. (3)** Specific theories and methods applied to the integration of microcomputers into the curriculum for students. 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 6190. MICROCOMPUTERS AND EDUCATIONAL SERVICES. (3)** Specific theories and methods for the application of instructional technologies in the secondary school. Candidates will discuss how to leverage emerging technologies effectively to increase student engagement and academic achievement.

**EDCI 7000. FOUNDATIONS OF EDUCATION. (3)** A critical analysis is made of the sociological, psychological, and philosophical foundations of education. A survey of approaches of professional ethics will be included in the treatment of philosophy.

**EDCI 7020. DOCTORAL SEMINAR IN CURRICULUM. (3)** Designed for advanced doctoral candidates to identify and focus on elements and dimensions of curriculum. Candidates will be responsible for designing, developing, and presenting their personal positions on theory, problems, and practices in curriculum and instruction as related to improving educational programs and organizations.

**EDCI 7030. INDEPENDENT STUDY. (3)** The candidate 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. The scholarly work could be presented at a conference, workshop, or research symposium.

**EDCI 7080. CURRICULUM THEORY. (3)** A course that explores the historical development of curriculum theory and the evolutionary process that leads to contemporary curricula today.

**EDCI 7110. SEMINAR IN INSTRUCTION. (3)** A seminar in the current issues, trends, and research in classroom instruction.

**EDCI 7120. ADVANCED METHODS OF RESEARCH. (3)** A course designed to expose candidates to the many and varied types of educational research. The content of the course and practical experience included in it will enable candidates to conduct educational research with skill, competence, and the necessary knowledge with which to design studies, projects, and grant proposals. The writing style is guided by the manual adopted by the College of Education.

**EDCI 7140. PRINCIPLES OF TEACHING. (3)** Consists of a critical examination of the present data relevant to the fundamental principles of teaching. It also provides the student with an opportunity to study factors that affect teaching and teaching strategies.

**EDCI 7450 LEARNING THEORIES FOR TEACHERS. (3)** A critical examination of the purpose of education in schools and the bearing of this purpose on problems of organization and administration, the selection of subject matter, and instructional practice. Consideration will be given to the significance of our educational purpose and practice to our concept of a democratic society.

**EDCI 7870. THE ELEMENTARY AND SECONDARY CURRICULUM. (3)** This course provides an overview of K-12 curriculum. The skills, understandings, and attitudes translated through the various instructional organizations, programs, materials, activities, resources, and teaching strategies. Effective designs will be emphasized.

**EDCI 8100. DOCTORAL DISSERTATION IN CURRICULUM AND INSTRUCTION. (3-12)** The successful completion of a dissertation is required for the Ed.D. student. The student may register twice for this course (partial semester hours). Credit is awarded upon the acceptance of the dissertation and the passing of the examination.

## READING

**EDRD 5310. IN-SERVICE EDUCATION WORKSHOPS. (1-3)** Workshops designed to address a variety of reading education topics.

**EDRD 6500. INVESTIGATING READING AND WRITING PROCESS. (3)** Candidates examine psychological processes that occur during reading, as well as reasoning strategies that are necessary for comprehending written messages. An emphasis will be on reasoning strategies necessary for a reader to: (a) be able to evaluate the degree of truth in ideas expressed in various written messages and (b) be able to use ideas gained from written messages to help him/her make better decisions in daily life.

**EDRD 5590. FOUNDATIONS OF TEACHING READING. (3)** Survey and analysis of theory, concepts, principles, processes, practices, and materials relevant to reading programs kindergarten through adult.

**EDRD 5610. THE TEACHING OF READING IN GRADES K-8. (3)** Reviews the entire elementary school reading program from the reading readiness stage through junior or high grades. Emphasis on methods and materials of teaching reading in kindergarten through grade eight, and the development of higher-level skills in reading as children mature.

**EDRD 5640. DIAGNOSIS AND TREATMENT OF READING DISABILITIES. (3)** Investigation of common causes of reading disabilities, diagnosis of such disabilities by individual and group procedures, and establishment of treatment programs.

**EDRD 5690. PRACTICUM IN READING EDUCATION. (3)** A practical experience will be designed by the pupil and the instructor after an analysis of the pupil's needs as his job tasks relate to reading. Different experiences (as examples) could emphasize classroom instruction, remedial-clinical instruction, screening pupils for special programs, supervising reading teachers, and designing or administering reading programs.

**EDRD 5800. LINGUISTIC APPLICATIONS TO TEACHING LANGUAGE ARTS. (3)** Designed to provide teachers with current theory concerning the cultural, linguistic, cognitive, and affective aspects of receptive and productive language. Theory is translated into classroom practice emphasizing the teaching of reading, writing, and spelling.

**EDRD 5870. INTERPRETING RESEARCH FINDINGS INTO CLASSROOM PRACTICE. (3)** Advanced seminar for graduate students. This course emphasizes survey and review of current research in various phases of reading and their implications for instructional strategies.

**EDRD 6030 READING AND WRITING ACROSS THE CURRICULUM. (3)** Reading and writing abilities, and other elements surrounding literacy, are important issues facing middle and secondary teachers and schools. Challenges that face teachers with learners in their literacy needs and abilities are addressed. This course examines a number of topics, instructional strategies, and classroom ideas for guiding learners' literacy and development in their content classes. Prerequisite: Admission to Teacher Education or are a licensed teacher by the State of Tennessee or United States equivalency.

**EDRD 6050 STRATEGIES FOR DEVELOPING READING/STUDY SKILLS IN MIDDLE AND SECONDARY SCHOOLS. (3)** Course demonstrates teaching techniques that develop advanced reading/study strategies. Candidates learn how formal and informal diagnostic techniques can be developed and applied to their respective content areas to better meet student individual needs for learning and achievement. Instructional practices and strategies will be demonstrated, modeled, and candidates will develop these strategies for use within their content classes. Prerequisite: Admission to Teacher Education or are a licensed teacher by the State of Tennessee or United States equivalency.

**EDRD 6120. CURRENT TRENDS AND ISSUES IN READING - LANGUAGE ARTS EDUCATION. (3)** Course is designed to explore current trends and issues, including curricular structures and administrative and other school practices that affect the teaching of reading-language arts.

**EDRD 6200. DIRECTED INDIVIDUAL STUDY OF INSTRUCTIONAL STRATEGIES IN READING. (1-3)** Individual study is centered around reading instruction and/or programs; directed by advisor or other professors.

**EDRD 6210. DIRECTED INDIVIDUAL STUDY IN SUPERVISING READING INSTRUCTION AND/OR PROGRAMS. (1-3)** Individual study centered around the supervision of reading instruction and/or programs; directed by adviser or other professors. (May be repeated).

**EDRD 6220. DIRECTED INDIVIDUAL STUDY OF INDIVIDUALIZED CLINICAL PROCEDURES. (1-3)** Individual study of individualized clinical procedure directed by adviser or other professors. (May be repeated).

**EDRD 7020. PROVIDING IN-SERVICE FOR TEACHERS OF READING AND OTHER LANGUAGE ARTS. (3)** Model programs for providing in-service in the improvement of reading-language arts instruction will be examined. Topics will include ways to make it easy for teachers to apply what they learn from in-service to classroom practice.

**EDRD 7100. INTERNSHIP IN SUPERVISION OF READING INSTRUCTION AND/OR PROGRAMS. (1-3)** Explores and studies at an advanced level the structure and function of reading programs at local and state levels in relation to their functions to promote literacy and to alleviate reading disability; to be taken as requirement for those pursuing the area of Reading Supervision.

**EDRD 7200. INTERNSHIP IN READING CLINIC. (1-3)** An advanced course. Clinical placement in approved facilities in community reading clinics. Offers experience under direction of clinician and/or course instructor.

## SPECIAL EDUCATION

**EDSE 5100. MULTICULTURAL/BILINGUAL EXCEPTIONAL STUDENT: AN INTRODUCTION TO THE FIELD OF MULTICULTURAL/BILINGUAL SPECIAL EDUCATION. (3)** This course is designed to provide an introduction to the field of Multicultural/Bilingual Special Education, its characteristics, issues and the representation of this group in today's classroom. Emphasis will be on several factors that affect the representation of this population in special education classrooms.

**EDSE 5370/6370. CHARACTERISTICS AND STRATEGIES FOR THE PHYSICALLY CHALLENGED. (3)** This course is an advanced study of the learning, behavioral, psychological, physical, medical, and social needs of the physically challenged. Strategies and educational accommodations and maintenance of the child in the least restrictive environment are integral.

**EDSE 5520/6520. ORGANIZATION AND ADMINISTRATION OF PROGRAMS AND SERVICES FOR THE DISABLED. (3)** This course is designed for educators and other professional personnel with the responsibility for planning, developing, and administering programs for persons with disabilities. Legal, social, political, educational, community, parental, and funding issues are considered.

**EDSE 5530/6530. EDUCATION AND PSYCHOLOGY OF EXCEPTIONAL CHILDREN. (3)** A survey of issues dealing with psychology and education of exceptional children. Special attention is paid to the characteristics, etiologies, needs, and scope of each group. Observation and practical work with exceptional children is an integral part of the course.

**EDSE 5540/6540. THEORY AND PROCEDURES FOR TEACHING THE EXCEPTIONAL CHILD. (3)** This course extends knowledge of behavior modification, cognitive behavior modification, and eclectic approaches. Applications will be made of the following: diagnostic-prescriptive teaching, contracting, graphing, cooperative learning, peer tutoring, cognitive blending, role play, multicultural concepts, reinforcement and punishment techniques, research-validated strategies and more. Field experiences are required.

**EDSE 5550. CHARACTERISTICS OF YOUNG EXCEPTIONAL CHILDREN. (3)** This course addresses the characteristics and needs of children with disabilities, ages 0 - 8. Included topics are: psycho-social aspects, familial/multicultural, developmental, legal, and theoretical aspects. Research and field experiences are required.

**EDSE 5560/6560. PSYCHO-EDUCATIONAL DIAGNOSIS OF THE EXCEPTIONAL CHILD. (3)** Administration and interpretation of various psychological and educational assessment instruments. Candidates will be involved in actual evaluation, administration, and interpretation of tests. Test results will be used to develop goals for the individualized educational program (IEP). Field experiences. Prerequisite: EDSE 5530 and 5580 or consent of instructor.

**EDSE 5570/6570. CONSULTATION AND COLLABORATION. (3)** This course is an advanced course which will explore various consultative and collaborative models of teaching. Strategies that enhance the interactions between the regular education teacher, the special education consultant teacher, the resource teacher, community supports and services are the focus. Topics include communication skills team teaching, methods for inclusion/mainstreaming, parent education/home instruction programs, and research-validated approaches. Field experiences are required. Prerequisites: EDSE 553 and 554 or consent of instructor.

**EDSE 5580/6580. LEARNING AND BEHAVIOR DISABILITIES. (3)** Topics for this course include typical and atypical characteristics and patterns of development in physical (including reflexes), psychomotor, cognitive, social-emotional (including self-esteem), character and morality, and language areas, along with etiologies and theoretical perspectives relating to normal children and those with learning and behavior problems. The importance of early learning as a factor in variable growth and learning is stressed. Field experiences are required.

**EDSE 5590/6590. CHARACTERISTICS AND NEEDS OF THE GIFTED. (3)** The course addresses the characteristics and needs of gifted learners, including special needs of minority gifted learners. Cognitive, affective, and psychosocial domains will be covered, as well as an array of alternatives for the provision of special education services. Research and field-based experiences are required.

**EDSE 5600/6600. TEACHING THE GIFTED. (3)** The course covers predominant theoretical approaches, teaching procedures, and education of gifted learners; methods and materials for special and regular classrooms and alternative administrative arrangements; research and demonstration; and field experiences.

**EDSE 5630/6630. TEACHING EARLY CHILDHOOD SPECIAL EDUCATION. (3)** Using the diagnostic-prescriptive approach to teaching, various methods and materials will be covered with applications to young children and their families in areas of language, cognitive, self-help, motor, social including self-esteem and character building. Individual family service plans and on-going procedures for documenting child's progress, home-instruction program, and articulations with community agencies and other personnel involved in services to the young child. Various theories, team approaches (i.e. interdisciplinary and transdisciplinary), and treatment models will be introduced. Field experiences are required. Prerequisite: EDSE 5530, 5580, 5540, and 5550 or consent of instructor.

**EDSE 5640. MANAGING INAPPROPRIATE CLASSROOM BEHAVIOR. (3)** Theories, goals and intervention strategies for serving exceptional learners with mild to severe behavior disorders. Field experiences are required. Prerequisites: EDSE 5530, 5580, and 5540 or consent of instructor.

**EDSE 5680. INSTRUCTIONAL INTERVENTION FOR STUDENTS WITH MILD DISABILITIES (3)** This course focuses on the study of best practices in instructional intervention for social and behavior skills, number and print literacy, as well as transition planning. Field experience in special education classrooms is required. Prerequisites: EDSE 5530, 5580, and 5540 or consent of instructor.

**EDSE 5690. MANAGING TRANSITIONS FOR EXCEPTIONAL PERSONS. (3)** With a brief review of the history and organization of the special education service system and with concepts of normalization, the least restrictive environment, and community involvement foremost in mind, this course focuses on models and skills necessary to successfully manage the transition of exceptional persons from one service setting to another. Transitions from preschool to elementary and from school to work settings are emphasized. Field experiences are required. Prerequisites: EDSE 553 and 554 or consent of instructor.

**EDSE 5700. CURRICULUM, METHODS AND MATERIALS FOR MULTICULTURAL/BILINGUAL SPECIAL EDUCATION. (3)** This course is designed to provide different curriculum, strategies, techniques and methods to provide the individual special needs of the children from diverse cultural/linguistic and ethnic backgrounds in the classroom. Appropriate curriculum needs and material development will also be addressed.

**EDSE 5710. TEACHING INDIVIDUALS WITH SEVERE DISABILITIES. (3)** This course addresses the teaching of functional and daily living skills for the profoundly to moderately disabled; the stimulation, development, and integration of sensory-motor, perceptual, and communicative skills, and self-help abilities. Home instruction, family support, and school and community articulations are covered. Field-based experiences are required. EDSE 5530 5540 5370or 5580or consent of instructor.

**EDSE 5720. MEDICAL ASPECTS OF EXCEPTIONALITY. (3)** This course surveys frequently occurring medical problems that impact upon the educational programs of children with disabilities. Seizure management, preventing the spread of communicable diseases, procedures for changing ostomy bags, CPR, Heimlich, suctioning, and tube feeding are among the topics covered. Frequent prescriptions from physical and occupational therapists along with the accompanying equipment are also reviewed, and medical dilemmas and ethics presented. Research and field-based experiences are required. Prerequisites: EDSE 553, 555, and 558 or consent of instructor.

**EDSE 5730/6730. ASSESSMENT OF EXCEPTIONAL MULTICULTURAL/BILINGUAL POPULATIONS. (3)** This course is designed to address the formal and informal methods of assessment of Multicultural/Bilingual populations. The issues of second language acquisition, language development and language loss will also be emphasized, in order to develop and in-depth understanding of the nature of the assessment.

**EDSE 5800. TECHNOLOGY IN SPECIAL EDUCATION AND REHABILITATION. (3)** This course has several components: study of the various technologies utilized in Special Education and Rehabilitation; utilization of the computer for instruction, electronic communication, and instructional management; evaluation of appropriate computers and software; and utilization of theoretical perspective, goals, and intervention strategies (instructional and therapeutic) for developing and implementing computer based educational environments and aids for the individuals with disabilities and the gifted.

**EDSE 5810/6810. CULTURAL PLURALISM & LANGUAGE DISORDERS. (3)** This course will provide an overview of pluralistic philosophy, developing sensitivity to diversity in communication and learning cross-disciplinary application concepts.

**EDSE 5820/6820. CULTURAL DIVERSITY & BEHAVIOR DISORDERS. (3)** This course will address the socio-cultural perspective of diverse nature of behavior problems of children from diverse cultural/linguistic backgrounds who are identified with behavior disorders (BD). Course participants will investigate a variety of strategies and procedures that have been effective in working with learners from minority backgrounds who exhibit difficult to manage behaviors in the classroom. Participants will also research over-representation of minority learners in BD programs.

**EDSE 5900/6900. PRACTICUM IN SPECIAL EDUCATION. (3-12)** The purpose of this course is to give candidates the opportunity to work under supervision with exceptional learners 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 5910, 5920, 5930, 6910, 6920, 6930. PROBLEMS AND PROJECTS IN SPECIAL EDUCATION. (3)** Individualized projects in special education under the direction of an appropriate member of the Special Education program. May not be taken to replace methods courses. Required: Consent of instructor.

**EDSE 5950. STUDENT TEACHING OF EXCEPTIONAL CHILDREN. (6-12)** Observation and supervised practicum with children and youth with mild disabilities. Prerequisite: Admission to Teacher Education, and passing scores on the Praxis II examinations.

**EDSE 5960. INTERNSHIP IN SPECIAL EDUCATION. (6-12)** Supervised teaching experience for those currently employed as a special education teacher. Internship may only be used to substitute for student teaching. Prerequisites: Completion of all course work and Admission to Teacher Education, and passing scores on the Praxis II examinations.

**EDSE 7910. SEMINAR IN SPECIAL EDUCATION. (3)** This advanced course is intended for doctoral students and includes a review of current issues, trends, theories, practice, research and the application of each to practice.

## FACULTY

Nicole Kendall Arrighi, Associate Professor

B.S., 1999 University of Tennessee at Martin, M.S. 2000, Peabody College of Vanderbilt University, Ed.D., 2005, Tennessee State University.

Jane Asamani, Professor

Practitioner License, 1981, Moneaque Teachers College, St. Ann, Jamaica; B.A., 1981, University of the West Indies, Mona Kingston, Jamaica; M.A., 1986, Fisk University; Ed.S., 1993, Tennessee State University; Ed.D., 1995, Tennessee State University

Sumita Chakraborti Ghosh, Professor

B.S., 1975, Calcutta University, Calcutta, India; B.S., 1987, Utah State University; M.A., 1979, Rabindrabharah University, Calcutta India; Ph.D., 1998, New Mexico State University

Beth Christian, Professor

B.A., 1991, University of Tennessee; M.A., 1993, Middle Tennessee State University; Ph.D., 2002, Peabody College of Vanderbilt University

Charles Dickens, Professor

B.A., 1971, George Peabody College for Teachers; M.S., 1972, University of Tennessee; Ph.D., 1979, George Peabody College of Vanderbilt University

Blanche Glimps, Professor

B.S., 1964, Eastern Michigan University; M.Ed., 1967, Wayne State University; Ph.D., 1979, University of Michigan

Carol Helton, Associate Professor

B.A., 1968, George Peabody College for Teachers; M.Ed., 1973, University of Memphis; Ed.D., 1994, Tennessee State University

Calli Holaway, Assistant Professor

B.S., 1993, Concordia University, Nebraska; M.A., 1999, University of South Dakota; Ph.D., 2005, University of Arkansas

J. Mark Hunter, Professor

B.A., 1982, College of Charleston; M.M.A., 1983, University of South Carolina; Ed.D., 1991, Virginia Polytechnic Institute and State University

Show-Mei Lin, Assistant Professor

B.A., 1981, Soochow University; M.S.W. 1985, California State University, Fresno; Ph.D., 2009, The University of Oklahoma.

Dolores Mathis, Professor

B.A., 1967, Florida A & M; M.A., 1969, M.A., 1971, The Ohio State University, Ed.S., 1971, Ph.D., 1975, University of Michigan

Mary Ann Pangle, Associate Professor

B.S., 1961; M.A. 1965, George Peabody College; Ed.D. 2004, Tennessee State University.

Judith Presley, Professor

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

Heraldo Richards, Associate Professor, Associate Dean, College of Education

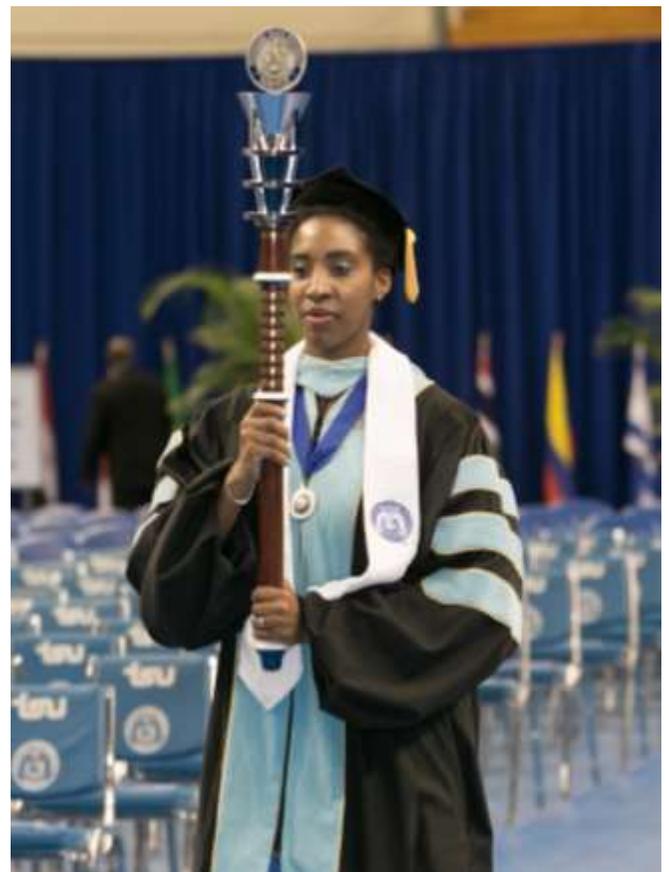
B.A., 1975, University of Chicago; M.A.; 1985, University of Michigan; Ph.D., 1993, Northwestern University

John David Tiller, Assistant Professor

B.S., 1973, Gardner Webb University, M.R.E.; 1978, Southeastern Baptist Theological Seminary; Ed.D., 2000, Tennessee State University.

Celeste Williams, Professor

B.S., 1987, Guilford College; M.S., 1995; Ed.D. 2001, Tennessee State University



# **COLLEGE OF ENGINEERING**

# COLLEGE OF ENGINEERING

**S. Keith Hargrove, CMfgE, PE, Ph.D., Dean**  
**203 Andrew P. Torrence Hall (615) 963-5401**

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**Associate Dean - TBD**

**230E Andrew P. Torrence Hall**  
**(615) 963-5400**

The College of Engineering includes the departments of Civil and Architectural, Electrical and Computer Engineering, Mechanical and Manufacturing Engineering, Aeronautical and Industrial Technology, Mathematical Sciences and Computer Science. The College has about 55 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 2 million dollars per year and supports about fifteen different research projects.

## DEGREE PROGRAMS

Computer and Information Systems Engineering	Ph.D.
Computer, Information, and Systems Engineering	M.S.
Computer Science	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

#### Associate Dean - TBD, Coordinator

The Doctor of Philosophy (Ph.D.) program in Computer and Information Systems Engineering (CISE) is a unique interdisciplinary program. It integrates the strengths of various disciplines of computer science, computer engineering, electrical engineering, mechanical / manufacturing engineering, information systems, and systems engineering. The program further provides advanced knowledge and research experiences in the following concentration areas;

Computer Communication and Networks  
 Control System and Signal Processing  
 Robotics and Computer Integrated Manufacturing

#### Goals

1. The primary goal of the Ph.D. program in Computer and Information Systems Engineering at Tennessee State University is to prepare its graduates with expertise in systems engineering approach to the development of computer based information and manufacturing systems.
2. To offer an outstanding and unique interdisciplinary Ph.D. degree program that is research-based and builds upon the educational and research expertise of existing faculty in the three concentrations and related areas.
3. To address the critical shortage of teaching and research faculty in the areas of computer communication and networks, control system and signal processing, and robotics and computer integrated manufacturing.

#### Admission Procedure

All students applying for admission must submit to the Graduate School: a completed Graduate Admission Application form, two copies of transcripts from all colleges and universities previously attended, and three letters of recommendation.

#### Admission Requirements

For admission to the Ph.D. in CISE program, the student must have a:

1. A Bachelor of Science degree in Engineering or Computer science from an accredited program or
2. a Master of Science in CISE, Computer Science, or in a closely related area or a Master of Engineering.
2. Student with a B.S. degree and/or Master's degree(s) from foreign universities must submit a Certificate of Proficiency in English or a minimum score of 550 or equivalent on the Test of English as a Foreign Language (TOEFL).
3. In addition to the above, the student must have a cumulative grade point average (GPA) of 3.00 or above on a 4.00 scale for a B.S. degree graduate while a Master of Engineering or a Master of Science in CISE, Computer Science, or a closely related area graduate must have a 3.30 grade point average on a 4.00 scale. In addition the student must have above average grades in all of the prerequisite courses in related mathematics, engineering science, communication systems, computer hardware and computer science courses. If an evaluation of a student's transcripts reveals course or prerequisite deficiencies, the student must eliminate all deficiencies by satisfactorily completing each of the prerequisite courses prescribed before unconditional status is achieved and before completing nine (9) graduate credit hours. Student must file a letter of intent to pursue the Ph.D. degree to the Coordinator of the Ph. D. program after receiving unconditional status. None of the courses used to eliminate undergraduate deficiencies will be used to meet degree requirements.

#### Transfer Credits

Transfer students with Masters degrees and beyond may transfer up to a maximum of 24 credit hours of equivalent courses towards required and/or elective courses.

#### Major Advisor

Initially the Coordinator of the Ph.D. program will serve as an academic advisor for all new students entering the program. Each student in the Ph.D. program is expected to select a major advisor by the beginning of the second year. All major advisors must hold tenure or tenure-track full-time graduate faculty positions.

### **Ph.D. Advisory Committee**

A Ph.D. Advisory Committee will consist of four (4) graduate faculty from the student's program with the major advisor as its chairperson. The Ph.D. Advisory Committee will be recommended by the major advisor, with input from the student, to the Coordinator of the Ph.D. program, for approval by the Dean of the College of Engineering and the Dean of Graduate Studies. Upon the student's completion of core courses and selection of a concentration, this Ph.D. Advisory Committee will review the student's prior transcripts, evaluate and recommend any transfer credits, and prepare a program of study for approval by the Coordinator of the Ph.D. program and the Dean of College of Engineering 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, the M.S. in Computer Science, 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 and the Graduate School as listed in the Graduate Catalog.

### **Curriculum Description**

This program requires a minimum of seventy-two (72) graduate semester credit hours beyond the bachelor's degree for the Ph.D. degree in CISE. Students with master's degree in a related field may transfer up to a maximum of 24 semester credit hours of the equivalent courses for this degree. However, if a student lacks certain prerequisites or course requirements, the student may be asked to take additional courses before the required graduate courses. The program in CISE is unique and interdisciplinary because it has a core requirement that provides the necessary foundation to computer based systems integration.

### **Program of Study**

The curriculum consists of 51 credit hours of course work and 21 credit hours of research dissertation. The course work consists of eighteen (18) credit hours of core courses and eighteen (18) credit hours of concentration, and fifteen (15) credit hours of guided electives. All graduate students must attend graduate seminars for at least two semesters.

Required Core Courses (18 semester credit hours)		
CISE 5010	Data Structures and Algorithms	3
CISE 5020	Computer Architecture and Operating Systems	3
CISE 5030	Software Systems Design	3
CISE 5040	Systems Engineering	3
CISE 5220	Computer Aided Systems Design	3
CISE 5230	Computer Communications and Networks I	3

### Concentration and Electives (33 semester credit hours)

Suggested courses in each of the three areas of concentration to be selected by student's Ph.D. Advisory Committee and approved by the Program Coordinator and the Dean of the College of Engineering.

#### Computer Communication and Networks

CISE 5110	Intro. to Artificial Intelligence	3
CISE 5210	Probability, Statistics, and Risk Analysis	3
CISE 5240	Management of Information Systems	3
CISE 5210	Introduction to Modeling and Simulation	3
CISE 6000	Database Management Systems	3
CISE 6100	Optimization in Operations Research	3
CISE 6340	Computer Communication and Networks II	3
CISE 6360	Distributed Computing Theory and Design	3
CISE 6440	Numerical Visualization	3
CISE 7300	Network Programming	3
CISE 7310	Metrics and Models in Software Quality Engineering	3
CISE 7340	High Performance Computing Applications	3
CISE 7350	Network Security and Risk Analysis	3
CISE 7370	Optical Communication	3
EECE 5200	Digital Signal Processing	3
EECE 5230	Digital Image Processing	3
ENGR 5070	Object Oriented Programming for Engineering	3

#### Control System and Signal Processing

CISE 5110	Intro. to Artificial Intelligence	3
CISE 5300	Fundamentals of Robotics	3
EECE 5220	Modern Signal Processing	3
EECE 5230	Digital Image Processing I	3
EECE 5640	Advanced Topics in Control Systems	3
EECE 6220	Robust Control Theory	3
EECE 6230	Nonlinear Control Systems	3
EECE 6250	Digital Spectral Analysis	3
EECE 6260	Pattern Recognition and Classification	3
EECE 7200	Statistical Signal Processing	3
EECE 7220	Intelligent Control Systems	3
EECE 7230	Adaptive Filtering and Stochastic Control Systems	3
CISE 7240	Computer Vision	3
CISE 7420	Advanced Robotics	3
CISE 7450	A. I. Robotics	3
ENGR 5100	Methods of Applied Math for Engineering	3
ENGR 5070	Object Oriented Programming for Engr.	3
ENGR 5200	Modeling and Simulation of Dynamic Sys.	3
CISE 7506	Special Topics	3

#### Robotics and Computer Integrated Manufacturing

MEEN 5010	Introduction to Manufacturing	3
MEEN 5040	Vibration Analysis	3
MEEN 5130	Flexible Manufacturing Systems	3
MEEN 5430	Intro. to Computational Fluid Dynamics	3
MEEN 5610	Computer Aided Design and Manufacturing	3
MEEN 5620	Design for Manufacturability	3
MEEN 5630	Manufacturing Quality Control and Management	3

MEEN 5640	Manufacturing Modeling and Simulation	3
MEEN 5650	Predictive and Preventive Maintenance	3
MEEN 5660	Concurrent Manufacturing	3
ENGR 5100	Methods of Applied Math for Engineers	3
ENGR 5070	Object Oriented Programming for Engr.	3
ENGR 5200	Modeling and Simulation of Dynamic Syst.	3
CISE 5300	Fundamentals of Robotics	3
CISE 6400	Fundamentals of Robotics in Manufacturing	3
MEEN 6430	Manufacturing Diagnosis and Prognosis Tech.	3
CISE 6440	Numerical Visualization	3
MEEN 6450	Transport Phenomena in Manufacturing	3
CISE 7420	Advanced Robotics	3
CISE 7430	Mechatronics Systems	3
CISE 7450	A.I. Robotics	3
CISE 7507	Special Topics	3
Ph.D. Dissertation (21 semester credit hours)		
CISE 7900	Ph.D. Dissertation	21

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

CISE 7600	Seminar	3
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## MAJOR: COMPUTER, INFORMATION AND SYSTEMS ENGINEERING (CISE)

### DEGREE: MASTER OF SCIENCE (M.S.)

The Master of Science degree program in Computer, Information and 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-Thesis Option

Courses Required - 24 credit hours

CISE 5020	Computer Architecture & Operating System	3
CISE 5030	Software Systems Design	3
CISE 5040	Systems Engineering	3
CISE 5210	Probability Statics, and Risk Analysis	3
CISE 5230	Computer Communication and Networks	3
CISE 5250	Introduction to Modeling and Simulation	3
CISE 5905	Master of Science Thesis I	3
CISE 5906	Master of Science Thesis II	3
Two Electives from the list below with the consent of advisor - 6 credit hours		
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5260	Wireless Communication, Principles and Practice	3
CISE 5300	Fundamentals of Robotics	3
CISE 5400	Special Topics in CISE	3
CISE 6100	Optimization in Operations Research	3
CISE 3640	Computer Communication and Network II	3
CISE 6360	Distributed Computing Theory & Design	3
CISE 7350	Network Security and Risk Analysis	3

#### PROGRAM OF STUDY- Non-Thesis Option

Courses Required - 21 credit hours

CISE 5020	Computer Architecture & Operating System	3
CISE 5030	Software Systems Design	3
CISE 5040	Systems Engineering	3
CISE 5210	Probability Statics, and Risk Analysis	3
CISE 5230	Computer Communication and Networks	3
CISE 5250	Introduction to Modeling and Simulation	3
CISE 5900	System Engineering Design	3

Four Electives from the list below with the consent of advisor - 12 credit hours

CISE 5110	Introduction to Artificial Intelligence	3
CISE 5260	Wireless Communication, Principles and Practice	3

CISE 5300	Fundamentals of Robotics	3
CISE 5400	Special Topics in CISE	3
CISE 6100	Optimization in Operations Research	3
CISE 3640	Computer Communication and Network II	3
CISE 6360	Distributed Computing Theory & Design	3
CISE 7350	Network Security and Risk Analysis	3

#### MAJOR: COMPUTER SCIENCE

#### DEGREE: MASTER OF SCIENCE (M.S.)

#### CONCENTRATIONS: HIGH-PERFORMANCE COMPUTING & BIOINFORMATICS CYBER-SECURITY & NETWORKING

Ali Sekmen, Ph.D., Chair

Tamara Rogers, Ph.D., Coordinator

The Department of Computer Science offers a Master of Science degree in Computer Science. The M.S. in Computer Science program provides recent college graduates, or college graduates who have had several years of professional life, an opportunity to enhance their careers and work on cutting-edge areas of computer science. The program offers two concentrations: (1) high-performance computing and bioinformatics, and (2) cyber-security and networking.

The M.S. in Computer Science offers the non-thesis and thesis options. All students are required to complete a total of 33 credit hours that include 9 credit hours of major core courses, 12 credit hours of concentration core courses, 6 credit hours of electives, and 6 credits hours of design-based courses (for non-thesis option) or 6 credit hours of thesis (for thesis option).

Substitution within the core courses may be permitted with the consent of the advisor and approval of the department chair.

#### Admission Requirements

All students desiring to enroll for graduate study must apply through the Office of the Dean of Graduate Studies and Research. To be admitted to the program, students should demonstrate readiness to succeed in the graduate program. To do this, students should meet the following criteria:

1. Applicants must have an academic background that covers certain prerequisite knowledge in mathematics, software systems and computer programming, data structures, computer architectures, and computer networks. Student transcript should present evidence of the following courses with a grade of "C" or better:

**a. Mathematical background:** 8 credit hours of calculus and 3 credit hours of linear algebra.

**b. Completion of undergraduate computer science prerequisites courses (or their equivalents):** COMP 2240 (Computer Programming II), COMP 2400 (Computer Organization), COMP 3040 (Data Structures), COMP 3310 (Data Communications and Computer Networks), and COMP 4100 (Operating Systems).

1. The applicant must have a Bachelor's degree in Computer Science or a related area with a minimum cumulative grade point average (GPA) of 2.75 on a 4.0 scale.
2. The applicant must submit two letters of recommendation.

The application materials of each applicant will be evaluated by a committee, which may recommend some prerequisite undergraduate courses for the applicants under conditional admission. The applicant will have conditional classification until the completion of the recommend course or courses. If admitted the applicant must correct the deficiency within the first two semesters.

An applicant whose Bachelor's degree is not in Computer Science or a related area and who has exceptional experience in Computer Science may also be considered for conditional admission on an individual basis. Such applicants must have a minimum GPA of 2.75 and provide a written technical summary for evaluation of their technical experience. This summary should emphasize the applicant's experience with software systems and methodology, computer organization and architecture, and theory and mathematical background.

*Conditional admission:* Applicants admitted in this category will not be allowed to take more than 6 credits hours of graduate courses in the program until successful completion of the prerequisite courses with grade C or above.

### Non-Thesis and Thesis Options

The proposed program requires completion of either a 6-credit hour thesis, for the thesis option, or 6 credit hours of design-based courses, for the non-thesis option. For the thesis option, a thesis manuscript and an oral presentation are required to document the student's research activity. A thesis committee will supervise the student's thesis work. The committee will consist of 3 faculty members, including the thesis chair. At least 2 of the committee members must be computer science graduate faculty. The chair must be a computer science faculty with graduate faculty credentials. For the non-thesis option, 6 credit hours of design-based courses are required. These courses will be selected from an approved list with advisement of the student's advisor. These courses have a strong project/design component.

### Retention Requirements

The following is a list of the retention requirements:

1. Students are required to maintain a cumulative GPA of 3.00 throughout the program. After completion of nine semester hours of graduate work, if the student's cumulative GPA at the end of the given semester falls below 3.00, the student will be placed on probation. A student who fails to attain a cumulative GPA of 3.00 during the next semester enrolled will be suspended.
2. 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.
3. Students who have repeated a core course and failed to achieve a grade B or higher will be dismissed from the program.
4. The maximum time allowed for completion of the master's degree is six calendar years. All requirements for the M.S. in CS degree must be completed within the six-year period beginning with the student's first term of enrollment in a graduate course.
5. Students dismissed from the program will not be readmitted.

### Graduation Requirements

The M.S. in Computer Science program has two tracks: (a) a non-thesis program that requires 33 hours of coursework or (b) the thesis program that requires completion 27 hours of coursework and a thesis. The thesis option is strongly recommended for the students who intend to pursue a doctoral degree. The Master of Science degree in Computer Science will require the following:

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. The student must file an *Admission to Candidacy* form with the Graduate School prior to the semester in which graduation is desired.
2. A minimum of 33 credit hours of graduate work, including 18 credit hours of required graduate core courses, with the following conditions for the Non-Thesis Option and Thesis Option:

#### Non-thesis Option:

The student must complete 33 credit hours of graduate computer science coursework.

#### Thesis Option:

The student must complete 27 credit hours of graduate computer science coursework and 6 credit hours of thesis work. A thesis is documented by a report and an oral presentation is required. A thesis committee will supervise the student's thesis work. The committee will consist of 3 faculty members including the thesis chair. At least 2 of the committee members must be computer science graduate faculty. The chair must be computer science faculty.

### M.S. IN COMPUTER SCIENCE (CONCENTRATION I) HIGH-PERFORMANCE COMPUTING & BIOINFORMATICS

#### PROGRAM OF STUDY-Thesis Option

Courses Required - 27 credit hours

COMP 5100	Software Engineering	3
COMP 5200	Advanced Algorithms Design and Analysis	3
COMP 5300	Advanced Computer Architecture s	3
COMP 5520	Introduction to High-Performance computing	3
COMP 5800	Introduction to Bioinformatics	3
COMP 6100	Bioinformatics Computing and Computational Biology	3
CISE 6360	Distributed Computing and Design	3
COMP 5910*	Master of Science Thesis I	3
COMP 5920*	Master of Science Thesis II	3

\*Requires completion of a 2-semester long thesis work in high-performance computing and bioinformatics.

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

COMP 5400	Hybrid and Relational Databases	3
COMP 5700	Fundamentals of Computer Networks	3
COMP 5720	Cryptography and Computer Security	3
COMP 5750	Computer Network Management and Security	3
COMP 5440	Mobile Robotics	3
COMP 5600	Mobile Applications Development	3
COMP 5900	Special Topics	3
COMP 6200	Machine Learning	3
COMP 6280	Advanced Web Applications Development	3
COMP 6300	Advanced Software Engineering	3
COMP 6800	Introduction to Computer Vision	3
COMP 6900	Embedded Systems Programming	3
ENGR 5070	Object-Oriented Programming for Engineering	3
ENGR 6150	Advanced Software Architectures	3
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5220	Computer Aided Systems Design	3
CISE 6000	Database Management Systems	3
CISE 7300	Network Programming	3

#### PROGRAM OF STUDY- Non-Thesis Option

Courses Required - 21 credit hours

COMP 5100	Software Engineering	3
COMP 5200	Advanced Algorithms Design and Analysis	3
COMP 5300	Advanced Computer Architecture s	3
COMP 5520	Introduction to High-Performance Computing	3
COMP 5800	Introduction to Bioinformatics	3
COMP 6100	Bioinformatics Computing and Computational Biology	3
CISE 6360	Distributed Computing and Design	3

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

COMP 5400	Hybrid and Relational Databases	3
COMP 5700	Fundamentals of Computer Networks	3
COMP 5720	Cryptography and Computer Security	3
COMP 5750	Computer Network Management and Security	3
COMP 5440	Mobile Robotics	3
COMP 5600	Mobile Applications Development	3
COMP 5900	Special Topics	3
COMP 6200	Machine Learning	3
COMP 6280	Advanced Web Applications Development	3
COMP 6300	Advanced Software Engineering	3
COMP 6800	Introduction to Computer Vision	3
COMP 6900	Embedded Systems Programming	3
ENGR 5070	Object-Oriented Programming for Engineering	3
ENGR 6150	Advanced Software Architectures	3
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5220	Computer Aided Systems Design	3
CISE 6000	Database Management Systems	3
CISE 7300	Network Programming	3

Two Design-Based Courses from the list below with the consent of advisor - 6 credit hours\*\*

COMP 5400	Hybrid and Relational Databases	3
COMP 5440	Mobile Robotics	3
COMP 5600	Mobile Applications Development	3
COMP 6200	Machine Learning	3
COMP 6280	Advanced Web Applications Development	3
COMP 6300	Advanced Software Engineering	3
COMP 6900	Embedded Systems Programming	3
ENGR 6150	Advanced Software Architectures	3
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5220	Computer Aided Systems Design	3
CISE 6000	Database Management Systems	3

\*\*Course other than this list can still be taken with the approval of advisor and department chair.

**M.S. IN COMPUTER SCIENCE (CONCENTRATION II)  
CYBER-SECURITY & NETWORKING**

**PROGRAM OF STUDY-Thesis Option**

Courses Required - 27 credit hours

COMP 5100	Software Engineering	3
COMP 5200	Advanced Algorithms Design and Analysis	3
COMP 5300	Advanced Computer Architecture s	3
COMP 5700	Fundamentals of Computer Networks	3
COMP 5720	Cryptography and Computer Security	3
COMP 5750	Computer Network Management and Security	3
CISE 7300	Network Programming	3
COMP 5910*	Master of Science Thesis I	3
COMP 5920*	Master of Science Thesis II	3

\*Requires completion of a 2-semester long thesis work in cyber-security and networking.

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

COMP 5400	Hybrid and Relational Databases	3
COMP 5440	Mobile Robotics	3
COMP 5520	Introduction to High-Performance Computing	3
COMP 5600	Mobile Applications Development	3
COMP 5800	Introduction to Bioinformatics	3
COMP 5900	Special Topics	3

COMP 6100	Bioinformatics Computing and Computational Biology	3
COMP 6200	Machine Learning	3
COMP 6280	Advanced Web Applications Development	3
COMP 6300	Advanced Software Engineering	3
COMP 6800	Introduction to Computer Vision	3
COMP 6900	Embedded Systems Programming	3
ENGR 5070	Object-Oriented Programming for Engineering	3
ENGR 6150	Advanced Software Architectures	3
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5220	Computer Aided Systems Design	3
CISE 6000	Database Management Systems	3
CISE 7300	Network Programming	3

**PROGRAM OF STUDY- Non-Thesis Option**

Courses Required - 21 credit hours

COMP 5100	Software Engineering	3
COMP 5200	Advanced Algorithms Design and Analysis	3
COMP 5300	Advanced Computer Architecture s	3
COMP 5700	Fundamentals of Computer Networks	3
COMP 5720	Cryptography and Computer Security	3
COMP 5750	Computer Network Management and Security	3
CISE 7300	Network Programming	3

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

COMP 5400	Hybrid and Relational Databases	3
COMP 5440	Mobile Robotics	3
COMP 5520	Introduction to High-Performance Computing	3
COMP 5600	Mobile Applications Development	3
COMP 5800	Introduction to Bioinformatics	3
COMP 5900	Special Topics	3
COMP 6100	Bioinformatics Computing and Computational Biology	3
COMP 6200	Machine Learning	3
COMP 6280	Advanced Web Applications Development	3
COMP 6300	Advanced Software Engineering	3
COMP 6800	Introduction to Computer Vision	3
COMP 6900	Embedded Systems Programming	3
ENGR 5070	Object-Oriented Programming for Engineering	3
ENGR 6150	Advanced Software Architectures	3
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5220	Computer Aided Systems Design	3
CISE 6000	Database Management Systems	3
CISE 7300	Network Programming	3

Two Design-Based Courses from the list below with the consent of advisor - 6 credit hours\*\*

COMP 5400	Hybrid and Relational Databases	3
COMP 5440	Mobile Robotics	3
COMP 5600	Mobile Applications Development	3
COMP 6200	Machine Learning	3
COMP 6280	Advanced Web Applications Development	3
COMP 6300	Advanced Software Engineering	3
COMP 6900	Embedded Systems Programming	3
ENGR 6150	Advanced Software Architectures	3
CISE 5110	Introduction to Artificial Intelligence	3
CISE 5220	Computer Aided Systems Design	3
CISE 6000	Database Management Systems	3

\*\*Course other than this list can still be taken with the approval of advisor and department chair.

**MAJOR: ENGINEERING**  
**DEGREE: MASTER OF ENGINEERING (M.E.)**

- CONCENTRATIONS:**  
**BIOMEDICAL ENGINEERING**  
**CIVIL ENGINEERING**  
**ENVIRONMENTAL ENGINEERING**  
**ELECTRICAL ENGINEERING**  
**MECHANICAL ENGINEERING**  
**MANUFACTURING ENGINEERING**

The College of Engineering offers work leading to the Master of Engineering (M.E.) degree with six concentrations: Biomedical Engineering, Civil Engineering, Environmental Engineering, Electrical Engineering, Mechanical Engineering, and Manufacturing Engineering.

The Master of Engineering degree requires

1. admission of all degree seeking students to candidacy for the degree after the completion of nine (9) graduate credit hours in residence at the University;
2. a minimum of thirty-three (33) graduate semester hours of course work, including at least six (6) credit hours of mathematics, three (3) credit hours of laboratory based courses, three (3) credit hours of special problems in engineering applications (design project), and six (6) credit hours of electives with the consent of the advisor.

Substitution within the core courses may be permitted with the consent of the advisor and the department head.

**Admission Requirements**

For unconditional admission to the Master of Engineering degree program, the student must have a bachelor's degree in engineering or science from an accredited program and must have the necessary prerequisite courses. If the evaluation of a student's undergraduate degree program reveals prerequisite deficiencies, the student must eliminate them by satisfactorily completing each of the prerequisite courses prescribed before unconditional status is achieved. None of the courses used to eliminate undergraduate deficiencies may be used in the student's program of study for the Master of Engineering degree.

For admission with unconditional classification, in addition to the above, the student must possess a grade point average (GPA) of 3.00 on a 4.00 scale.

For admission with conditional classification, in addition to the above, the student must have a GPA between 2.75 and 2.99 or a GPA between 2.50 and 2.74 and a passing score of 70 on the Fundamental of Engineering (FE) examination.

All students applying for admission must submit to the Graduate School a completed Graduate Application form and two copies of transcripts from all colleges and universities previously attended.

**PROGRAM OF STUDY**

Courses Required, All Options - 12 hours

ENGR 5100	Methods of Applied Mathematics for Engineers I	3
*CISE 5220/BMEN 5000/CVEN 5360/MEEN 5610/CVEN 5780/CVEN5780/CVEN5050		3
ENGR 5500	Special Problems	3
Either of the following three-hour courses		
ENGR 5150	Numerical Methods for Engineers	3
ENGR 5020	Optimization Methods for Engineers	3

\*According to Concentration

**CONCENTRATION I:  
 BIOMEDICAL ENGINEERING**

**Mohammed Bodruzzaman, Ph.D.**  
**Professor, ECE**

**Areas of Specialization**

Biomedical Core Courses - 15 hours

BIOL 5200/5240	General Physiology/Systemic Physiology	3
BIOL 5150	Special Problems II: Neurobiology	3
BMEN 5010	Introduction to Biomedical Engineering	3
BMEN 5030	Medical Imaging and Signal Processing	3
BMEN 5040	Biomechanics	3

**Electives with the consent of the advisor - 6 hours**

**CONCENTRATION II:  
 CIVIL ENGINEERING**

**Farouk Mishu, Ph.D., P.E., Interim Chair and Professor**

**Civil Engineering**

**Required Courses**

CVEN 5050	Transportation Modeling	3
CVEN 5360	Environmental Engineering Laboratory	3
CVEN 5780	Finite Element Analysis	3

**Most Commonly Offered Elective Courses**

Transportation Engineering Courses with the consent of the advisor

CVEN 5090	Traffic Engineering	3
CVEN 5100	Pavement Design	3
CVEN 5200	Advanced Geometric Design of Highways	3
CVEN 5660	Highway Safety Engineering	3

Structural Engineering Courses with the consent of the advisor

CVEN 5420	Advanced Foundation Engineering	3
CVEN 5710	Advanced Reinforced Concrete Design	3
CVEN 5730	Matrix Analysis of Structures	3
AREN 5100	Computer Codes	3

Environmental Engineering Courses with the consent of the advisor

CVEN 5290	Air Pollution Control	3
CVEN 5320	Environmental Engineering Design	3
CVEN 5350	Hazardous Waste Management	3
CVEN 5380	Environmental Impact Analysis	3

**CONCENTRATION III:  
 ENVIRONMENTAL ENGINEERING**

**Farouk Mishu, Ph.D., P.E., Interim Chair and Professor**

Core Courses - 15 hours listed below:

CVEN 5280	Solid Waste Management	3
CVEN 5300	Environmental Engineering Processes I	3
CVEN 5370	Environmental Chemistry	3
CVEN 5290	Air Pollution	3
CVEN 5320	Environmental Engineering Design	3
Electives with the consent of the advisor - 6 hours		
CVEN 5270	Ground Water Contamination	3
CVEN 5330	Water Quality Management	3

CVEN 5350	Hazardous Waste Management	3
CVEN 5380	Environmental Impact Analysis	3

ENGR 5200	Modeling and Simulation of Dynamic Systems	3
Electives with the consent of the advisor - 6 hours		

**CONCENTRATION IV:  
ELECTRICAL ENGINEERING**

**Satinderpaul S. Devgan, Ph.D., P.E., Professor**

**Areas of Specialization**

**A. COMMUNICATION SYSTEMS**

Core Courses - 15 hours from courses listed below:

EECE 5010	Information Theory	3
CISE 5110	Intro. to Artificial Intelligence	3
EECE 5220	Modern Signal Processing	3
EECE 5230	Digital Image Processing	3
CISE 5210	Probability, Statistics & Risk Analysis	3

Electives with the consent of the advisor - 6 hours

**B. CONTROL SYSTEMS**

Core Courses - 15 hours from courses listed below:

CISE 5110	Intro. to Artificial Intelligence	3
ENGR 5070	Object Oriented Programming for Engr.	3
ENGR 5200	Modeling and Simulation of Dynamic Sys.	3
CISE 5300	Fundamentals of Robotics	3
EECE 5640	Advanced Topics in Controls	3

Electives with the consent of the advisor - 6 hours

**C. ELECTRICAL POWER SYSTEMS**

Core Courses - 15 hours from courses listed below:

CISE 5110	Intro. to Artificial Intelligence	3
EECE 5300	Computer Applications to Power System	3
EECE 5310	Power System Relaying	3
EECE 5320	Surge Phenomenon in Power Engineering	3
EECE 5330	Special Topics in Power Engineering	3
CISE 5210	Probability, Statistics & Risk Analysis	3

Electives with the consent of the advisor - 6 hours

**CONCENTRATION V:  
MECHANICAL ENGINEERING**

**Hamid Hamidzadeh, Ph.D., Professor and Chair**

**Areas of Specialization**

**A. THERMAL SCIENCES**

Core Courses - 15 hours from courses listed below:

MEEN 5020	Optimization Methods for Engineering Design	3
MEEN 5030	Artificial Neural Networks	3
MEEN 5050	Energy Conversion Systems	3
MEEN 5310	Dynamics and Thermodynamics of Compressible Fluid Flow	3
MEEN 5400	Conduction and Radiation Heat Transfer	3
MEEN 5410	Convection Heat Transfer	3
MEEN 5420	Advanced Thermodynamics	3
MEEN 5780	Finite Element Analysis	3
MEEN 5820	Principles of Design	3

**B. MACHINE DESIGN**

Core Courses - 15 hours from courses listed below:

MEEN 5020	Optimization Methods for Engineering Design	3
MEEN 5030	Artificial Neural Networks	3
MEEN 5040	Vibration Analysis	3
MEEN 5100	Theory of Viscoelasticity and Applications	3
MEEN 5110	Theory of Plasticity and Applications	3
MEEN 5120	Manufacturing Tribology	3
MEEN 5200	Advanced Dynamics	3
MEEN 5320	Lubrication	3
MEEN 5780	Finite Element Analysis	3
MEEN 5820	Principles of Design	3
ENGR 5200	Modeling and Simulation of Dynamic Systems	3

Electives with the consent of the advisor - 6 hours

**CONCENTRATION VI:  
MANUFACTURING ENGINEERING**

**Hamid Hamidzadeh, Ph.D., Professor and Chair**

Core Courses - 15 hours from courses listed below:

MEEN 5010	Introduction to Manufacturing	3
MEEN 5130	Flexible Manufacturing Systems	3
MEEN 5610	Computer-Aided Design and Manufacturing	3
MEEN 5620	Design for Manufacturability	3
MEEN 5630	Manufacturing Management and Control	3
MEEN 5640	Manufacturing Modeling and Simulation	3
MEEN 5650	Predictive and Preventive Maintenance	3
MEEN 5660	Concurrent Manufacturing	3
ENGR 5200	Modeling and Simulation of Dynamic Systems	3
MGMT 6060	Production and Operations Management	3

Electives with the consent of the advisor - 6 hours

**COURSE DESCRIPTIONS**

**ENGINEERING**

**ENGR 5070. OBJECT-ORIENTED PROGRAMMING FOR ENGINEERING. (3)** A course focused on design and implementation of engineering software systems using object-oriented programming approach. Object-oriented programming concepts are emphasized with applications from engineering and science. Topics include classes, interfaces, inheritance, polymorphism, packages, design patterns, and hardware-software integration. Java programming language is used as the main implementation language. Prerequisite: Basic programming skills (ENGR 2221 or ENGR 2231 or equivalent).

**ENGR 5100. METHODS OF APPLIED MATHEMATICS FOR ENGINEERING 1. (3)** Review of differential equations, Laplace and Fourier transforms, linear algebra, complex variables, integration in complex plane, residue theorem, partial differential equations, boundary value problems, and Integral equations. Prerequisite MATH 3120 or equivalent.

**ENGR 5150. NUMERICAL METHODS IN ENGINEERING. (3)** Numerical solutions of linear and non-linear equations, interpolation formulas, numerical integration and differentiation, and initial-value and boundary-value problems for ordinary and partial differential equations, eigenvalues and eigenvectors. Use of the computer in the numerical methods. Prerequisite ENGR 3400 or equivalent.

**ENGR 5200. MODELING AND SIMULATION OF DYNAMIC SYSTEMS. (3)** The course presents the methodology applicable to the modeling and analysis of a variety of dynamic systems, regardless of their physical origin. It includes detailed modeling of mechanical, electrical, electro-mechanical, thermal, fluid, manufacturing, and computer systems. Models are developed in the form of state-variable equations, input-output differential equations, transfer functions, and block diagrams. The course covers analogies among diverse physical systems, subsystem coupling methods, discretization of distributed systems, generalized time and frequency responses, systematic modeling for a broad class of systems using Bond Graphs, system identifications, and analytical and computer simulations using MATLAB and Simulink. **PREREQUISITE:** ENGR 5100 Methods of Applied Mathematics for Engineering

**ENGR 5300. PROBABILITY AND STATISTICS. (3)** Discrete and continuous probability densities, treatment of data, sampling distributions, inferences concerning means, variances and proportions, non-parametric test, curve fitting, regression analysis, and use of computer software in statistical problems, applications. **Prerequisite:** ENGR 3200 or equivalent.

**ENGR 5400. SENSOR TECHNOLOGY AND PROCESSING. (3)** Study of sensor technology, modeling, implementation, and processing in control of passive and active systems. Concepts of sensor signature fusion, modeling, recognition and classification. Demonstration of intelligent sensor-based autonomous systems. Discussion of methods for sensor performance measurements. Laboratory design projects required. **Prerequisite:** ENGR 5100.

**ENGR 5500. SPECIAL PROBLEMS. (3)** Industry-oriented design project coupled with oral presentation and a written report. **Prerequisite:** consent of advisor.

**ENGR 5605, 5606, 5607. (3)** Special subject presented to cover current problems of unique advances in the leading edge of techniques to technology transfer.

**ENGR 6150. ADVANCED SOFTWARE ARCHITECTURES. (3)** A project-based course focused on analysis, design, implementation, and integration of complex object-oriented software systems. State-of-the-art software reuse and component interoperability platforms such as COM, CORBA, Enterprise JavaBeans, and Web Services are discussed in detail. Distributed software system design methods as well as software design with UML are covered with practical applications. **Prerequisite:** ENGR 5070 or equivalent.

#### **BIOMEDICAL ENGINEERING (BMEN)**

**BME 5000. BIOMEDICAL INSTRUMENTATION. (3)** This course provides instructional materials on the biomedical instrumentation, physiological measurements and analysis of physiological signals. Basic theory of measurements, electrodes, sensors, transducer, data acquisition and electrical safety are covered. The emphasis is on the use of Biopac system for physiological measurements (such as EEG, ECG, EMG etc.), use of Matlab and/or LabVIEW tools in developing analysis and data interpretation tool. **Lecture 3 Credits. Prerequisites Courses (or Equivalent):** MATH 3120, ENGR 2000, 2001 and ENGR 2230.

**BMEN 5010. INTRODUCTION TO BIOMEDICAL ENGINEERING. (3)** A multi-disciplinary course of biomedical engineering which include: a historical perspective, basics of anatomy and physiology, bio-electric phenomena, biomedical sensors, bio-instrumentation, bio-signal processing, physiological modeling, skeletal muscle mechanics, cardiovascular mechanics, bio-materials, tissue engineering, biotechnology, radiation imaging, rehabilitation engineering and technology assisted therapies. Laboratory experiments for biomedical project design are also part of this course. **Lecture 3 Credits. Prerequisites:** EECE 4600 or equivalent.

**BMEN 5030. MEDICAL IMAGING AND SIGNAL PROCESSING. (3)** This course covers the principal methods for representing, storing, processing, coding, transmitting and analyzing of biomedical images by means of digital computers. Sampling theorems, image transforms, image enhancement and restoration, frequency domain and spatial domain techniques, image coding and transmission, and image segmentation and description are discussed. Applications will be on MRI, CAT, Ultrasound etc. **Pre-requisite:** EECE 4600 or equivalent.

**BMEN 5040. BIOMECHANICS. (3)** An interdisciplinary course on Biomechanics covering topics such as: Biomechanics of solids, fundamentals of fluid mechanics, physiological fluid mechanics, mass transfer, bioheat transfer, the modeling approach to the study of physiological systems, biomaterials, the interaction of biomaterials and biomechanics, locomotion and muscle biomechanics, principles of electrophoretic separation, and application of MATLAB and/or LabVIEW tools in developing analysis and data interpretation. **Lecture 3 Cr. Prerequisites (or Equivalent):** MATH 3030 or 3120, ENGR 2120, or permission from the instructor.

#### **CIVIL ENGINEERING**

**AREN 5100. COMPUTER CODES. (3)** Computer Codes and Systems as related to analysis and design of architectural, civil, electrical and mechanical engineering systems.

**CVEN 5020. OPTIMIZATION METHODS FOR ENGINEERING DESIGN. (3)** Computerized design methods for optimization techniques. Formulation of optimization. Problems using design variables and design constraints. Constrained and unconstrained minimization techniques using gradient and direct methods, special redesign directions for simplified analysis.

**CVEN 5050. TRANSPORTATION MODELING. (3)** Analytical evaluation of trip generation, gravity models, probabilistic models used in trip distribution trip assignment; shortest path algorithm, Modal split calibration and testing of existing models. Application of generalized linear models and categorical outcome models in civil engineering data analysis.

**CVEN 5090. TRAFFIC ENGINEERING. (3)** A study of traffic congestion, capacity, signs and signalization, accident analysis and pedestrian controls using MUTCAD guidelines.

**CVEN 5100. PAVEMENT DESIGN. (3)** Analysis and design of sub-base and roadway surface; the mechanics of layered pavements (flexible and rigid), stresses and design criteria involved.

**CVEN 5130. AIRPORT PLANNING AND DESIGN. (3)** An introduction to the airport design process, including airport planning, air site considerations, landslide considerations (terminal layout and design access systems, parking).

**CVEN 5140. URBAN MASS TRANSIT PLANNING. (3)** The mass transportation problem, demand analysis and statistical projections methodologies used in mass movement of people and goods using UMTA guidelines and procedures.

**CVEN 5200. GEOMETRIC DESIGN OF HIGHWAYS. (3)** Concepts of design and the mechanics of motion applicable to the construction, operation, and maintenance of highways systems and facilities using AASHTO guidelines. Field exercises in horizontal and vertical curve layout required.

**CVEN 5270. GROUNDWATER CONTAMINATION. (3)** Analysis of subsurface contaminant transport and remediation; activation, adsorption, dispersion, chemical reaction and biodegradation of contaminants in groundwater flow, application of mathematical models to predict contaminant transport; case studies.

**CVEN 5280. SOLID WASTE MANAGEMENT. (3)** Quantities and characteristics of solid wastes; collection methods and equipment; recycling of wastes; disposal methods including composting, incineration and sanitary landfills; economics and planning of solid waste management systems.

**CVEN 5290. AIR POLLUTION CONTROL. (3)** Sources of primary and secondary air pollution; production of air pollutants from combustion processes. Air pollution control devices; air quality modeling. **Prerequisite:** Graduate Standing or permission of instructor.

**CVEN 5300. ENVIRONMENTAL ENGINEERING PROCESSES I. (3)** Theory and application of physical and chemical processes applied to water and wastewater treatment systems including coagulation, flocculation, sedimentation and filtration. **Prerequisite:** Permission of instructor.

**CVEN 5320. ENVIRONMENTAL ENGINEERING DESIGN. (3)** Theory and design of structures for collection, purification, distribution, and disposal of water and wastewater.

**CVEN 5330. WATER QUALITY MANAGEMENT. (3)** Analytical evaluation of chemical, physical, and biological processes in natural water systems such as streams, lakes and estuaries; estimation of waste assimilation capacity; water quality criteria and management.

**CVEN 5340. INDUSTRIAL WASTE TREATMENT AND DISPOSAL. (3)** Evaluation of industrial waste problems; characteristics of wastes produced from industries; applications of engineering principles to treatment, recovery, and disposal of industrial wastes.

**CVEN 5350. HAZARDOUS WASTE MANAGEMENT. (3)** Generation of hazardous wastes by industries; nature and quantities of hazardous wastes; Transportation, treatment and Disposal; Environmental Impacts; Risk Analysis of Spills; management of Radioactive Wastes.

**CVEN 5360. ENVIRONMENTAL ENGINEERING LABORATORY. (3)** Basics of wet chemical analysis of water samples; titrimetric and spectrometric analysis; evaluation of processes such as coagulations, thickening, adsorption, gas transfer, etc. Prerequisite: Permission of instructor.

**CVEN 5370. ENVIRONMENTAL CHEMISTRY. (3)** The kinetics and equilibrium relationships controlling the chemical behavior of aquatic environments; distribution and behavior of chemical species in dilute aqueous systems.

**CVEN 5380. ENVIRONMENTAL IMPACT ANALYSIS. (3)** An introduction to techniques for monitoring and assessing the impacts of engineering systems on environmental quality; study of air, water, land and urban environments.

**CVEN 5400. THEORETICAL SOIL MECHANICS. (3)** Flow of water in soil, stresses in soil mass, 1-D and 3-D consolidated including standard and constant strain-rate tests, shear strengths of soils, Triaxial and Simple Shear Tests. Prerequisite: CVEN 3130 or equivalent.

**CVEN 5410. GROUND WATER AND SEEPAGE. (3)** Hydro mechanics of confined and unconfined flow of water through soil; potential theory, application to design of earth dams and retaining walls. Prerequisites: CVEN 3130 or equivalent.

**CVEN 5420. ADVANCED FOUNDATION ENGINEERING. (3)** Subsoil investigation, shallow foundations. Analysis and design of retaining walls, piles and pile foundations. Prerequisite: CVEN 4440 or equivalent.

**CVEN 5430. APPLIED SOIL MECHANICS. (3)** Slope stability analysis soil dynamics, earthquake-resistant design of retaining walls and dams. Advanced seepage analysis including Transformation methods and Geotextiles. Prerequisites: CVEN 3130 or equivalent.

**CVEN 5450. APPLIED ROCK MECHANICS. (3)** Dynamic response to rock media, core-drilling problems, rapid excavation in rock. Case history studies, evaluation of current theories used in design of tunnels. Prerequisite: CVEN 3130 or equivalent.

**CVEN 5460. NUCLEAR CHEMISTRY. (3)** This course will involve the characteristics of nuclides(Isotopes). Radioactive nuclides are those elements having different masses, the same atomic number but unstable nuclei. These are two different occurrences of radioactive nuclei. Prerequisite: Graduate standing.

**CVEN 5500. ADVANCED GEOMETRIC DESIGN OF HIGHWAYS. (3)** Parameters governing the geometric design of highways, mechanics of curvilinear motion curve super elevation, widening on highway curves, elements of intersection design and design of interchange, use of AASHTO design guidelines. A design project is required. Prerequisite: CVEN 3320 or equivalent.

**CVEN 5600. PAVEMENT DESIGN. (3)** Analysis and design of sub-base, base and pavement of a roadway, mechanics of layered pavement, discussion of flexible pavement and rigid pavement, and rigid pavements as structural units. Beams of elastic foundations. Prerequisites: CVEN 3130, 3320 or their equivalent.

**CVEN 5620. ADVANCED TRAFFIC ENGINEERING. (3)** Characteristics of traffic elements; the road user, the vehicle and the road; volume, speed and delay studies; accident cause and prevention; highway capacity: concepts and applications; analysis of signal systems; parking control and design; pedestrian protection; roadway illumination systems and other operational problems. Prerequisite: CVEN 4640 or equivalent, or consent of instructor.

**CVEN 5640. TRANSPORTATION SYSTEMS EVALUATION PROCEDURES. (3)** Examination of transportation problems, goals and objectives; evaluation and decision-making techniques in transportation planning; economic analysis of transportation systems; cost allocation and benefit transfer; uncertainty and risk analysis; differential impact of transportation improvements. Prerequisites: CVEN 3320, ENGR 5300.

**CVEN 5650. TRANSPORTATION MODELING. (3)** Analytical evaluation of trip generation, gravity models, probabilistic models used in trip distribution, trip assignment and model split models, use of computer package, shortest path algorithm, critical review of the art in model formulations. Calibration and testing of some existing models for this geographical area. Prerequisite: CVEN 3320 or equivalent.

**CVEN 5660. HIGHWAY SAFETY ENGINEERING. (3)** Study of accident statistics, reporting systems, and characteristics; accident reconstruction; principles and techniques used in identification and evaluation of hazardous locations; and corrective measures to enhance highway safety. Prerequisite: CVEN 4640 or equivalent, or consent of instructor.

**CVEN 5680. URBAN MASS TRANSIT PLANNING. (3)** The mass transportation problem, demand analysis and statistical projections methods, mass transit planning model, introduction to UMTA planning package program network simulation. Prerequisite: CVEN 3320 or equivalent.

**CVEN 5700. PLASTIC DESIGN IN STEEL. (3)** Plastic analysis and design of steel beams, frames and connections, using the methods of mechanisms, energy and the moment rotation characteristics. Designed by the specifications. Analysis and design in steel using the Load and Resistance Factor Design method. Prerequisite: CVEN 3440 or equivalent.

**CVEN 5710. ADVANCED REINFORCED CONCRETE DESIGN. (3)** Design of footings, retaining walls, and two-way slabs. Design of beams for torsion. Analysis and design of continuous structures. Analysis and design of prestressed concrete beams. Prerequisite: CVEN 3420 or equivalent.

**CVEN 5720. COMPOSITE STRUCTURE DESIGN. (3)** Design of wood beams, columns, shear walls, diaphragms, and connections based on the latest specification. Materials include sawn lumber, glued-laminated timber, and plywood. Prerequisite: CVEN 3120 or equivalent.

**CVEN 5730. MATRIX ANALYSIS OF STRUCTURES.** Development of stiffness matrix for linear structural elements. Matrix operations with particular emphasis on the solution of banded matrices. Development of computer programs for structural analysis using the stiffness method. Prerequisite: CVEN 3410 or equivalent.

**CVEN 5740. ELASTICITY. (3)** Equations of equilibrium, compatibility and boundary conditions, and their application to plane stress and plane strain problems. Stress functions, strain energy methods, stress distribution in axially symmetrical bodies, special problems, and structures involving torsion and bending or prismatic bars. Prerequisites: CVEN 3120 or equivalent.

**CVEN 5750. STABILITY AND VIBRATIONS OF STRUCTURES. (3)** Bending of prismatic bars under simultaneous action of axial and lateral loads, harmonic motion, free and forced vibrations of one-degree of freedom systems with and without damping. Systems with two or more degrees of freedom, vibration of rods and beams. Prerequisite: CVEN 3410 or equivalent.

**CVEN 5760. ADVANCED INDETERMINATE STRUCTURES. (3)** Analysis of indeterminate structures, including multi-story frames, bearing wall and shear wall buildings. Analysis of entire structure. Prerequisite: CVEN 3410 or equivalent.

**CVEN 5770. THEORY OF PLATES AND SHELLS. (3)** Elements of plate-bending. Analysis of circular and rectangular plates by classical, finite difference, and finite element methods. An introduction to membrane theory of shells. Prerequisite: CVEN 3120 or equivalent.

**CVEN 5780. FINITE ELEMENT ANALYSIS. (3)** Theoretical basis of finite element method. Elements for use in the solution of two and three dimensional stress problems, plate bending and shell problems. Development of computer programs utilizing plane stress conditions. Prerequisite: CVEN 3120 or equivalent.

**CVEN 5790. REINFORCED MASONRY DESIGN. (3)** Design of masonry elements with emphasis on reinforced masonry, including the design of beams, columns, walls, and footings. Structural analysis and design of masonry building. Prerequisite: CVEN 3440 or equivalent.

**CVEN 5800. ADVANCED STEEL DESIGN. (3)** Advanced topics in structural steel design, including composite design, build-up beams, plate girders, and moment resisting column base plates. Introduction to design of roof trusses, rigid frames, bridges, and multistory buildings. Structural analysis and design of steel structure. Prerequisite: CVEN 3440 or equivalent.

**CVEN 5820. PRINCIPLES OF DESIGN. (3)** Development of design theories; design for manufacturability; evaluation of design; redesign principles; case studies.

**COMPUTER, INFORMATION, AND SYSTEMS ENGINEERING (CISE)**

**CISE 5005. INTRODUCTION TO COMPUTER HARDWARE SYSTEMS. (3)** Introduction to circuits elements and techniques of circuits analysis. Operational amplifier and techniques of Op-Amp circuit design. Boolean algebra and logic gates, design of combinational and sequential logic circuits, registers and counters, digital integrated circuits. Machine language, RISC and CISC architectures, and design of arithmetic unit, processor, memory system and input/output systems. Prerequisite: Graduate standing.

**CISE 5006. INTRODUCTION TO INFORMATION SYSTEMS. (3)** Introduction to linear system theory: Fourier series, Fourier transform, Laplace transform, Z-transform, power spectrum, and linear system analysis. Probability theory and random variables. Theory of information and communication systems, modulation theory, multiplexing, introduction to digital communications, computer communication systems and network protocols. Prerequisite: Graduate standing.

**CISE 5007. INTRODUCTION TO COMPUTATION AND COMPUTER SOFTWARE. (3)** This course provides background of computation and computer software for CISE students who are deficient in these areas. It is designed to introduce the concepts of discrete mathematics, data structures and algorithms, and operation system organization. Students study the selected topics which include (1) basic discrete structures such as sets, logic, functions, relations, counting and probability, and graph theory; (2) fundamental data structures such as array, list, stack, queue and binary search tree; algorithm design techniques such as divide-and-conquer, dynamic programming, and greedy technique; algorithm complexity analysis; well-known algorithms for sorting, searching, pattern matching, networked computing and communication; (3) important concepts of operating systems such as processes, thread, scheduling, deadlock, memory management, virtual memory, page replacement algorithm. This course will not be used to meet degree requirements. Prerequisite: Basic programming skills (ENGR 2230 or equivalent).

**CISE 5010. DATA STRUCTURES AND ALGORITHMS. (3)** Files and data structures used in computing such as lists, etc., techniques of storing and retrieving data such as hashing, indexing, etc., relational data-base models, SQL databases and servers, and data-base management systems. Selection and design of algorithms, search and sorting techniques, pattern matching, mathematical problems. Prerequisite: COMP 3200, ENGR 2230 or equivalent.

**CISE 5020. COMPUTER ARCHITECTURE AND OPERATING SYSTEMS. (3)** An understanding of capabilities, limitations and applications of different computer architectures of large supercomputers to smaller workstations. Basic computer resource management techniques, discussion of types of operating systems, distributed and parallel processing, real time programming and inquire-response systems. An overview of different implementations. Prerequisite: COMP 4110 or COMP 3410 or EECE 4300 or equivalent.

**CISE 5030. SOFTWARE SYSTEMS DESIGN. (3)** Concept of software product life cycle, software design methodologies, stages in software development, metrics and models, reliability and reusability of code, software development tools, analysis, and design validation, small team projects involving architectural design and software specifications, computer aided software engineering (CASE). Prerequisite: EECE 3061 or COMP 3050 or EECE 4310.

**CISE 5040. SYSTEMS ENGINEERING. (3)** Introduction to systems, the system design process, systems analysis tools, including decision making, economic evaluation, optimization, queuing theory, statistical methods and process control concepts. Design for operational feasibility, human factors, logistics and systems engineering management. A systems engineering based technical report is required. Prerequisite: ENGR 3200, 3200, 4400, Math 3210 or equivalent.

**CISE 5050. ADVANCED DISCRETE MATHEMATICS. (3)** Selected topics in discrete mathematics, formal systems, mathematical deduction, logical concepts, theorem proving sets, relations on sets, operations on sets, functions, graphs, mathematical structures, morphism, algebraic structures, semigroups, finite state machines and simulation, Kleene theorem. Prerequisites: COMP 3200.

**CISE 5060. ERROR CONTROL CODES. (3)** Introduction to codes for error detection and correction, linear algebra over finite fields, bounds, perfect and quasi-perfect codes, probability of error checking, Hamming, BCH, MDS, Reed-Solomon codes, and non-linear codes. Prerequisite: COMP 3200, EECE 3500 or equivalent.

**CISE 5110. INTRODUCTION TO ARTIFICIAL INTELLIGENCE. (3)** Studies of different artificial intelligent concepts and techniques including: neural network topologies and training algorithms, fuzzy logic and decision making systems, genetic algorithms and search algorithms, probabilistic reasoning and belief functions. Applications in engineering will be discussed. Prerequisite: ENGR 5200 or equivalent.

**CISE 5210. PROBABILITY, STATISTICS AND RISK ANALYSIS. (3)** Fundamental concepts of probability and statistics with practical applications to analyze and manage risks inherent in computer, information, and system engineering projects. Emphasis on basic concepts of probability; random variables; discrete and continuous probability distributions; sampling; statistical inference; tests of hypotheses; uncertainty measurement and modeling; Bayesian method; risk identification, analysis and management. Pre-requisite: Graduate standing;

**CISE 5220. COMPUTER AIDED SYSTEMS DESIGN. (3)** Advanced computer-aided analysis and design tools for analysis of system properties and performance, study of structure and theory of computer aided design software and hardware and the small scale design of such tools. Prerequisites: EECE 3100, 3101, CISE 5010 or equivalent.

**CISE 5250 Introduction to System Modeling and Simulation.(3):** This course will cover concepts and skills required to design, program, implement, and use computers to solve complex systems analysis problems. The students will learn how to formulate modeling problems, build effective models, analyze data, and use models to evaluate alternative designs and processes that arise in the development of complex systems and products. The students will obtain an overview of modeling techniques used in decision analysis, including Monte Carlo simulation and system dynamics modeling. The techniques include concept graphs, Bayesian nets, Markov models, Petri nets, system dynamics, Bond graphs, cellular automata, and parallel and distributed simulation systems. Students will report on a particular technique and team to implement a chosen system model. Pre-requisite: Graduate standing. CISE 5210 or Instructor Approval

**CISE 5230. COMPUTER COMMUNICATION AND NETWORK. (3)** Covers theory of various information and computer communication networks and operation of open systems that enable exchange of information (data) in an open way to facilitate a range of distributed applications. Topics include - fundamental issues related to reliable transfer of data across serial data link following ISO reference model; data transmission over various types of communication medium; various types of computer networks that provide a switched communication facility over which computers can communicate; and the ISO layered network protocol, network topology, packet switching, routing, networks management, discussion of narrowband and broadband ISDN. Application of basic traffic theory, switching fundamentals and routing strategies. Prerequisite: EECE 3210, EECE 3500, EECE 4350 or equivalent.

**CISE 5240. MANAGEMENT OF INFORMATION SYSTEMS. (3)** This course will discuss current methods in use for the design and implementation of modern information technology in organizational systems. It will also provide a comprehensive introduction to basic principles of the legal, economic, and regulatory environment of the information industry. Prerequisite: MEEN 5020, EECE 3500 or equivalent.

**CISE 5260. WIRELESS COMMUNICATIONS, PRINCIPLES AND PRACTICE. (3)** This course will introduce fundamental theory and design of high capacity wireless communications systems. Topics include modern wireless standards and applications, cellular concept and implementation, mobile radio propagation, fading and multipath, modulation techniques, equalization, diversity, channel coding, multiple access technique, wireless networking. Prerequisite: EECE 3210, EECE 3500 or equivalent.

**CISE-5300. FUNDAMENTALS OF ROBOTICS. (3)** Two-dimensional and three-dimensional transformation techniques, manipulator kinematics and dynamics, robot differential motion and control, path planning and trajectory generation, task execution and robot programming will be discussed in details. Robot integration and simulation tools also will be presented. Prerequisite: ENGR 5100 or equivalent.

**CISE 5400. SPECIAL TOPICS IN CISE. (3)** Recent advanced topics in Computer and Information Systems Engineering will be studied based on faculty and students' needs Prerequisite: instructor's approval.

**CISE 5900 - SYSTEMS ENGINEERING DESIGN (3):** This is a capstone course for the M.S. in CISE (Computer, Information and Systems Engineering) program where the knowledge gained in prerequisite required courses will be applied. Various steps used in the systemic development and design of system of interest (SOI) will be practiced. System development phases such as; systems requirements, conceptual and logical alternatives, top-down and bottom-up system integration and life cycle issues, and system management and support plan will be applied to selected projects. A written report and oral presentation will be required. Pre-requisite: Student must have a grade of 'B' in CISE 5030, 5040 and 5230 or their equivalents.

**CISE 5905. MASTER OF SCIENCE THESIS I. (3)** Thesis topics to be selected in consultation with the chairman of thesis committee and approval of the department head. The thesis will involve hardware, software and systems approach to the design and development of an integrated system. Student must have completed need analysis, identified operational and functional requirements, TPMs, and bench marks for design evaluation and selected an appropriate solution to pursue. Student must also develop a management plan with milestones, define maintenance concepts for life cycle evaluation of optimum system. Student must complete these activities to receive a grade and as a prerequisite for next course. Prerequisite: Admission to Candidacy.

**CISE 5906. MASTER OF SCIENCE THESIS II. (3)** Continuation and completion of thesis and oral presentation defense. Prerequisite: CISE 5905.

**CISE 6000. DATABASE MANAGEMENT SYSTEMS. (3)** Database concepts. Database design Data models: entity-relationship and relational. Data manipulation languages including SQL. Data dictionaries. Query processing. Concurrency, software development environments use a database system. Expert, object-oriented, multimedia and distributed database systems. Database systems architecture. Use of a commercial database management system.

**CISE 6100. OPTIMIZATION IN OPERATIONS RESEARCH. (3)** Problem solving with mathematical models, deterministic optimization models in operations research, improving search, linear programming models, simplex search and interior point methods, duality and sensitivity in linear programming, multi objective optimization, shortest paths and discrete dynamic programming, network flows, discrete optimization methods and constrained and unconstrained nonlinear programming.

**CISE 6200. INTRODUCTION TO COMPUTATIONAL INTELLIGENCE. (3)** This course introduces the parallel computation techniques based on various artificial neural networks architectures. Learning rules for feed forward networks, Associative learning, competitive networks, Grossberg network, Hopfield network and their applications. Introduction to fuzzy logic theory, membership functions, fuzzy relations, fuzzy measures, approximate reasoning and design and applications of fuzzy and neuro-fuzzy systems. Introduction to genetic algorithms and their applications. Prereq: Graduate standing.

**CISE 6300. STATISTICAL INFORMATION THEORY. (3)** Foundations of modern digital communication systems. Random variables and random processors, autocorrelation functions; Digital signaling waveforms and their spectra. Probability of error in digital receivers. Information measure and source coding; channels and codes for error detection and correction. Introduction to traffic theory for telecommunications and optical communication. Prerequisite: EECE 3200 or equivalent.

**CISE 6340. COMPUTER COMMUNICATION AND NETWORKS II. (3)** Principles and issues underlying provision of wide area connectivity through interconnection of autonomous networks. Internet architecture and protocols today and likely evolution in future. Case studies of particular protocol practical Topics related to high-speed networks such as: frame relay, high-speed LANs and MANs, the asynchronous transfer mode (ATM) architecture, adaptation layers, switch architectures, preventive and reactive congestion control schemes, schemes for connectionless services over ATM, transmission schemes and signaling.

**CISE 6360. DISTRIBUTED COMPUTING THEORY AND DESIGN. (3)** Fundamental and systems design aspects of distributed systems, paradigms for distributed computing, client-server computing, concurrency control, distributed file systems, resource management, high-performance computing aspects.

**CISE 6400. FUNDAMENTALS OF ROBOTICS IN MANUFACTURING. (3)** Introduction to robotic automation, robot classifications, robot specifications, direct and inverse kinematics, workspace analysis; Trajectory planning, manipulator dynamics; Robot control, robot interface to manufacturing processes, machine interface, end-of-arm tooling, robot programming, and sensor integration and utilization in manufacturing. Laboratory projects are required. Prerequisites: Sound knowledge of static and dynamics, matrix operations, computer language programming or consent of the instructor.

**CISE 6440. NUMERICAL VISUALIZATION. (3)** Essential algorithms for three-dimensional rendering and modeling techniques; viewing transformations, illumination, surface modeling; methodologies for visualization of scalar and vector fields in three dimensions; applications of visualization.

**CISE 7240. COMPUTER VISION. (3)** This course covers the digital image processing and computer vision fundamentals, image analysis, image transforms, image restoration, image enhancement, image compression, image segmentation, image representation and description, image 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 7300. NETWORK PROGRAMMING. (3)** Review of TCP/IP and UDP, transport layer, elementary and advanced sockets, TCP sockets and client server examples I/O multiplexing, socket options, elementary and advanced UDP sockets, name and address conversions, daemon processes and intend supersaver, advanced I/O functions, Unix Domain protocols, non-blocking I/O, routing sockets, broadcasting, multicasting, threads, and streamers. Prerequisite: Unix Operating System, networking protocols or equivalent.

**CISE 7310. METRICS AND MODELS IN SOFTWARE QUALITY ENGINEERING.** (3) Software development and quality, process models, measurement theory, software quality metrics, Ishikawa's seven basic quality tools in software development, defect removal, effectiveness, the Rayleigh model, reliability growth models, quality management models, complexity metrics and models, measuring and analyzing customer needs, AS/400 software quality management. Prerequisite: CISE 5030, CISE 5040, or equivalent.

**CISE 7340. HIGH PERFORMANCE COMPUTER APPLICATIONS.** (3) Design and analysis of parallel algorithms in fixed-connection network and PRAM models. Numerical computations, sorting, and routing. Comparisons of various parallel machine models. Relating machine models to architectural characteristics.

**CISE 7350. NETWORK SECURITY AND RISK ANALYSIS.** (3) Network security fundamental, security in layered protocol architecture, cryptographic techniques, authentication, access control, confidentiality and integrity, standard security techniques, electronic mail and EDI security, Network security, security evaluation measures.

**CISE 7370. OPTICAL COMMUNICATION.** (3) Optical communication systems, optical wave propagation, photodetection statistics, heterodyne receiver, and noise sources. Evaluation of communication performance for the free-space channel. Introduction to fiber optic communication and fiber optic networks communication.

**CISE-7420. ADVANCED ROBOTICS.** (3) Mobile robotics platforms, both unmanned ground vehicles and aerial vehicles, will be studied. Robot system integrations, applications of intelligent technologies in robotics, robot behaviors, robot sensing and control, vision systems and sensor fusion techniques will be explained in detail. Prerequisite: CISE 5300 and ENGR 5070 or their equivalent.

**CISE 7430. MECHATRONICS SYSTEMS.** (3) Introduction to electro-mechanical systems. General design and fabrication, and integration of electro-mechanical systems including: transducers, active and passive sensors, measurement devices, actuation systems, open, closed, and adaptive controllers, microprocessors and system components electronic interfacing and communication. Laboratory projects required. Prerequisites: basic familiarity with the subject of measurement, instrumentation, control, vibration, and signal processing of electro-mechanical systems or consent of the instructor.

**CISE 7450. A. I. ROBOTICS.** (3) The theory of artificially intelligent robotics is studied. Topics needed to program artificially intelligent robots for real-world applications are covered. Intelligence organization architectures such as hierarchical and reactive paradigms are introduced. Topics related to mobile robot applications such as sensing, perception, programming techniques and navigation are also presented. Applications of AI robotics in different fields are discussed. Prerequisite: ENGR 2231 or EECE 3061 or equivalent.

**CISE 7505, 7506, 7507. SPECIAL TOPICS.** (3) Covers topics of specific area interest including special research topics. To be approved by advisor and program director.

**CISE 7600. SEMINAR.** (0) To be taken by all Ph.D. candidates for a duration on one year during the final year and the approval of the advisor.

**CISE 7900. CISE PH.D. DISSERTATION.** (3-9) Research in area of specialization to be carried out under the direction of Advisory Committee. Variable credit course.

## COMPUTER SCIENCE

**COMP 5100 SOFTWARE ENGINEERING.** (3) This course focuses on foundational concepts of software engineering including software processes and life-cycle models, software requirements and specifications, software design methodologies, software testing, maintenance, and cost analysis. Prerequisite: None.

**COMP 5200 ADVANCED ALGORITHMS DESIGN AND ANALYSIS.** (3) Analysis and design of advanced algorithms and data structures in many areas of computing including divide and conquer, dynamic programming,

greedy technique, graph algorithms, pattern matching, geometric algorithm, P and NP, and efficient approximation algorithms. Prerequisite: COMP 3040 and COMP 3200 or Equivalent.

**COMP 5300 ADVANCED COMPUTER ARCHITECTURES.** (3) This course introduces advanced computer architectures. It focuses on selecting and interconnecting hardware components to create a computer that meets functional, performance and cost goals, and teaches the qualitative and quantitative examination of computer design tradeoffs. It covers the system architecture, processor technology, advanced memory hierarchy and I/O organization, power and energy management, and reliability, and it further covers the new development in multicore, data center design, and parallel I/O. Prerequisite: COMP 2400 or Equivalent.

**COMP 5400 HYBRID AND RELATIONAL DATABASES.** (3) This course presents relational, object-oriented, and hybrid database concepts. Topics include: definitions of objects and attributes, methods and messages, classes, object-oriented data models, architectural issues, the object-oriented database system manifesto, object-oriented database design, object-oriented database management systems, and object/relational database management systems. Prerequisite: None.

**COMP 5440 MOBILE ROBOTICS.** (3) This course provides students with hands-on experience in mobile robot design, implementation, and testing. It covers mobile robot topics such as robot hardware, robot sensing, actuation, embedded system programming, and algorithms for localization, path planning, and mapping. It briefly covers multi-robot systems. Students are expected to work in laboratory in teams to build and test increasingly complex mobile robots and compete in an end-of-semester robot contest. Prerequisite: COMP 5100.

**COMP 5520 INTRODUCTION TO HIGH PERFORMANCE COMPUTING.** (3) This course focuses on concepts of distributed system, concurrency control, files system, resource management in shared/distributed memory, and high-performance computing in different computing systems. The topics include computing in multiple-core computer, GPU, computer cluster, parallel computer, and synchronous/asynchronous computer networks. The problems of consensus, communication, resource allocation, synchronization, link/process failures in synchronous/asynchronous networks will also be discussed. Prerequisite: COMP 5200.

**COMP 5600 MOBILE APPLICATIONS DEVELOPMENT.** (3) This course provides comprehensive understanding of the principles of application design, implementation, and testing for mobile platforms (e.g. cell phones). Memory management, user interface design and implementation, data handling, networking, GPS and motion-based sensing are among the topics covered. Students are expected to work in teams to build and test increasingly complex mobile phone applications and compete in an end-of-semester contest. Prerequisite: COMP 5100.

**COMP 5700 FUNDAMENTALS OF COMPUTER NETWORKS.** (3) This course provides fundamental design principles of ATM, Internet and local area networks; protocol layers and the Internet Architecture; medium access protocols; application protocols and TCP/IP utilities; basic principles and virtual circuit switching; naming and addressing; flow and congestion control protocols; routing algorithms; Quality-of-Service in computer networks; security issues in networks. Prerequisite: COMP 5100.

**COMP 5720 CRYPTOGRAPHY AND COMPUTER SECURITY.** (3) This course introduces modern cryptography, focusing on the fundamental concepts of secure computation and communication in the distrustful environments, for instance, wireless networks, internet banking, satellite radio and more. The course uses an incremental approach. It starts with the mathematics background of cryptography. Then, it will discuss attack and threaten models and security goals and review the traditional cryptography. The course will mainly investigate the techniques of modern cryptography in design of private and public key encryption schemes, digital signatures, authentication and key management. Applications in network security will be discussed. Prerequisite: ENGR 5100 and COMP 5700 or Equivalent.

**COMP 5750 COMPUTER NETWORK MANAGEMENT AND SECURITY.** (3) This course presents various concepts of computer network management and tools. Topics include: Network interfacing, measuring failures and availability, reliability, security, maintenance, network statistics, reconfiguration and documentation. Prerequisites: COMP 5700 or Equivalent.

**COMP 5800 INTRODUCTION TO BIOINFORMATICS. (3)** Bioinformatics is an interdisciplinary field in which biology and computer science merge. This course is designed to introduce students with concepts, methods and tools to analyze biological problems, prepare students with skills necessary to communicate across the fields of computer science and biology. Topics include (but not limited to) biological sequence and literature databases, strategies to search these databases to solve fundamental biological problems, principle and algorithms used for processing and analyzing biological information.

**COMP 5900 SPECIAL TOPICS. (3)** This course is for teaching important emerging computer science topics that are not covered in other computer science courses. Prerequisites: successful completion of at least 9 hours of COMP graduate courses.

**COMP 5910 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. Students in specific concentration are required to work on thesis work in their corresponding concentration areas. Other students may complete a thesis work in other state-of-the-art areas of computer science. Prerequisite: Completion of at least 18 credits of graduate coursework.

**COMP 5920 MASTER OF SCIENCE THESIS II. (3)** Continuation and completion of thesis and oral presentation defense. Prerequisite: COMP 5910.

**COMP 6100 BIOINFORMATICS AND COMPUTATIONAL BIOLOGY. (3)** This course is designed to introduce students with basic concepts, methods and tools to analyze biological information, algorithm design and programming skills for biology computing, and prepare students with knowledge and skills necessary to communicate and solve the problem across the fields of biology and computer science. Topics include fundamental knowledge of biology and bioinformatics, literature databases and tools for analysis and visualization, algorithm design, bioinformatics-oriented programming, and HPC of bioinformatics. Prerequisite: COMP 5800.

**COMP 6200 MACHINE LEARNING. (3)** This course provides a broad introduction to machine learning, data-mining, and statistical pattern recognition. Topics include: (i) Supervised learning (parametric/non-parametric algorithms, support vector machines, kernels, neural networks). (ii) Unsupervised learning (clustering, dimensionality reduction, recommender systems, deep learning). (iii) Best practices in machine learning (bias/variance theory; innovation process in machine learning and AI). The course will also draw from numerous case studies and applications, so that you'll also learn how to apply learning algorithms to building smart robots (perception, control), text understanding (web search, anti-spam), computer vision, medical informatics, audio, database mining, and other areas. Prerequisite: ENGR 5100 or Equivalent.

**COMP 6280 ADVANCED WEB APPLICATIONS DEVELOPMENT. (3)** This course provides a comprehensive overview of web-based software architectures (e.g. JSP, ASP, Servlets, Web Services) and their applications. Students are expected to work in teams on a medium-scale web application development. Prerequisite: COMP 5400.

**COMP 6300 ADVANCED SOFTWARE ENGINEERING. (3)** This course explores software engineering topics including software reuse, component-based software engineering, distributed software engineering, service-oriented architectures, embedded software development, aspect-oriented software engineering, advanced validation and verification methods, and configuration management. Prerequisite: COMP 5100.

**COMP 6800 INTRODUCTION TO COMPUTER VISION. (3)** This course introduces the concepts and applications in computer vision. Topics include: cameras and projection models, low-level image processing methods such as filtering and edge detection; mid-level vision topics such as segmentation and clustering; shape reconstruction from stereo, as well as high-level vision tasks such as object recognition, scene recognition, face detection and human motion categorization. Prerequisite: ENGR 5100 or Equivalent.

**COMP 6900 EMBEDDED SYSTEMS PROGRAMMING. (3)** In this project-based course, students will design and develop an application for an embedded systems platform, and then investigate low-level performance tuning and optimization. This course incorporates topics from the domains of software engineering, compilers, operating systems, and computer architecture, and provides students with the foundation they will need for addressing the concerns of developing real-world embedded systems. Prerequisite: C or Java Programming.

## ELECTRICAL ENGINEERING

**EECE 5000. STATISTICAL COMMUNICATION THEORY. (3)** Application of principles of probability theory and random processes to the analysis and design of digital communication systems: continuous and discrete random variables; spectral density functions of digital signals. Probability of per-bit error of detection of baseband and passband signals; word error rates. Operations view of communication systems; blocking and delay probabilities. Prerequisite: EECE 3500 or equivalent.

**EECE 5010. INFORMATION THEORY. (3)** The intuitive concepts of information measure and transmission are given a sound theoretical basis. The Shannon Theory of Information is studied, including the notion of entropy, source and channel coding, and capacity. Pre-requisite: EECE 3500 or equivalent.

**EECE 5020. OPTIMIZATION METHODS FOR ENGINEERING DESIGN. (3)** Computerized design methods for optimization techniques and formulation of optimization. Problems using design variables and design constraints. Constrained and unconstrained minimization techniques using gradient and direct methods, special redesign directions for simplified analysis.

**EECE 5030. ARTIFICIAL NEURAL NETWORKS. (3)** Introduction to Neural Networks, its development history, concept of connectionism, neuron models, structure of neural networks, learning strategies, content addressable memory, design and applications of neural networks and other pertinent topics. Prerequisite: MATH 3120, ENGR 3400 or equivalent.

**EECE 5100. COMPUTER STRUCTURES. (3)** Microcomputer structure and programming, including memory operation, bus configurations, instruction formats, register operations, addressing modes and I/O operations. Medium and large scale computer structure. Design and programming of microcomputers. Pre-requisite: 2230 and EECE 3100.

**EECE 5120. COMPUTER NETWORKS AND DISTRIBUTED PROCESSING. (3)** Introduction to computer communication networks, including layered architecture and protocols, data link, network and transport layers, routing and multiple access algorithms, local area network standards, hardware and software aspects of interfacing digital system components.

**EECE 5220. MODERN SIGNAL PROCESSING. (3)** Parametric representation of discrete random signals, ARMA, Lattice, and State Space models; AR, MA, and ARMA spectral estimation; Levinson, Lattice and Kalman filters; Time-frequency transformations of random signal. Applications in radar, sonar and biomedical systems. Prerequisite: EECE 3200.

**EECE 5230. DIGITAL IMAGE-PROCESSING. (3)** This course covers the principal methods for representing, sorting, processing, coding, transmitting and analyzing of images by means of digital computers. Sampling theorems, image transforms, image enhancement and restoration, frequency domain and spatial domain techniques, image coding and transmission, and image segmentation and description are discussed. Prerequisite: EECE 3200. Computer programming course or consent of instructor.

**EECE 5240. Digital Communication. (3)** Digital communication concepts, channel characterization, base-band pulse transmission, coherent and non-coherent digital signaling, inter symbol interference, base-band shaping, equalization, synchronization and detection, error-control codes, modems, and terminals. Prerequisite: EECE 3300, 3500 or equivalent.

**EECE 5300. COMPUTER APPLICATIONS TO POWER SYSTEMS. (3)** Computer methods are used for the formation of system characteristics such as Z-bus, Y-bus and others. The system load flow and fault studies for system design and planning are formulated with computer methods emphasized. Prerequisite: EECE 3420.

**EECE 5310. POWER SYSTEM RELAYING. (3)** Fundamentals of relaying design and operation of protective schemes for generators, transformers, transmission and distribution circuits. Analysis of relay operation during abnormal system conditions. Prerequisite: EECE 3420.

**EECE 5320. SURGE PHENOMENA IN POWER ENGINEERING. (3)** Traveling wave principles for analysis of overvoltages. Methods of protection against overvoltage due to lightning, ground wire shielding, system and tower grounding, lightning arresters. Dynamic overvoltages switching phenomena and system recovery voltages. Coordination of insulation and protective devices. Prerequisite: EECE 3420.

**EECE 5330. SPECIAL TOPICS IN POWER ENGINEERING. (3)** The selected important areas of electric power systems as power system stability, economic dispatch and/or power system control, system reliability, etc., will be discussed.

**EECE 5600. OPTIMAL CONTROL METHODS FOR ENGINEERING DESIGN. (3)** Modeling of dynamics, actuators, sensors and criteria of goodness; state variable models, dynamic linearization methods, controllability, observability and stability. Closed loop design using observers and pole allocation methods, optimum control problems. Maximum principle and dynamic programming. The deterministic linear quadratic design problem. Applications to process control and air traffic control. Prerequisite: EECE 4000.

**EECE 5610. STOCHASTIC ESTIMATION METHODS FOR ENGINEERING DESIGN. (3)** The linear Kalman Bucy filter, non-linear filtering, the extended Kalman filter, and second order filters. Structure of stochastic feedback control system. Interplay between modeling issues and mathematical design. Practical aspects of compensator realization. Prerequisites: ENGR 5300.

**EECE 5630. MODERN CONTROL SYSTEMS. (3)** Analysis and design of multi-variable systems; matrix theory, state variable and state space analysis and design, Cayley-Hamilton Theory, continuous-time and discrete-time domain analysis and design, intrinsic properties of controllability and observability, stability analysis of linear and nonlinear dynamic systems with direct method of Lyapunov. Prerequisite: EECE 4000 or equivalent.

**EECE 5640. ADVANCED TOPICS IN CONTROL SYSTEMS. (3)** Methods for design and analysis of stationary and time-varying control systems are presented. Advanced control system design techniques such as observability and controllability using state-space representation are emphasized. Adaptive, optimal, and robust control system designs are also studied. Artificial Intelligence approaches to controller system designs are introduced. Prerequisite: ENGR 5200 "Modeling and Simulation of Dynamic Control Systems" or equivalent.

**EECE 6220. ROBUST CONTROL THEORY. (3)** Introduction to the theory and techniques of Robust Control. The three distinct and major problem areas to be covered are the parametric approach, the  $H^\infty$  theory and the  $L_1$  theory. As linear system basics, topics include stability, performance, robustness, stable factorization and YJBK parameterization, and approximation of linear systems. In the parametric approach, topics include Kharitonov's theorem, parametric stability margins, polytopic systems, generalized Kharitonov's theorem, edge theorem, mapping theorem as well as mixed uncertainty problems. In  $H^\infty$  theory, topics include small gain theorem, Nevanlinna-Ploik interpolations and factorization theory, various  $H^\infty$  control problems, and DGKF solution.  $H_2/H_\infty$  optimal control, and  $L_1$  optimal control problem are also covered in this course.

**EECE 6230. NONLINEAR CONTROL SYSTEMS. (3)** Introduction to the concepts of nonlinear control systems. Topics include nonlinear system representation, nonlinear transformation, phase plane analysis, linearization and local stability, Lyapunov direct method, Lyapunov analysis for non-autonomous systems, positive linear systems, passivity in linear systems, absolute stability and Popov criterion, and feedback linearization.

**EECE 6250. DIGITAL SPECTRAL ANALYSIS. (3)** Review of classical parametric models of random processes and spectral estimation methods, autoregressive spectral estimation: block data algorithms and sequential data algorithms, autoregressive-moving average spectral estimation, Prony's method, minimum variance spectral estimation and eigen analysis based frequency estimation. Pre-requisite: EECE 5220 or equivalent.

**EECE 6260. PATTERN RECOGNITION AND CLASSIFICATION. (3)** Fundamental problems in pattern recognition system design, design of learning and adaptive machines, elementary decision theory, classification rules, pattern classification by distance functions and likelihood functions, deterministic and statistical approach to trainable pattern classifiers, pattern preprocessing and feature selection, elements of syntactic pattern recognition and adaptive classifiers, Prereq: Graduate standing.

**EECE 7200. STATISTICAL SIGNAL PROCESSING. (3)** Introduction to random process, detection and estimation theory, maximum variance unbiased estimation, Cramer-Rao lower bound, general minimum variance unbiased estimation, best linear unbiased estimation, maximum likelihood estimation, Least square methods of estimation, method of moments: second moments analysis, Bayesian philosophy and Bayesian estimators, and applications to communications and radar systems. Pre-requisite: EECE 5220 and graduate level probability and statistics. Prereq: EECE 3200.

**EECE 7210. ADAPTIVE CONTROL SYSTEMS. (3)** Introduction and overview of the theoretical and practical aspects of adaptive control. Topics include real-time parameter estimation, deterministic self-tuning regulators, model reference adaptive control, auto tuning, gain scheduling, and robust systems. Some new results in adaptive neural networks are included.

**EECE 7220. INTELLIGENT CONTROL SYSTEMS. (3)** Study analysis and design of intelligent control systems using soft computing methodologies. Concept of intelligent systems, neural network architectures such as; recurrent neural networks, CMAC neural networks, radial basis function (RBF) networks, and reinforcement learning. The concept of fuzzy logic, fuzzy inference systems (FIS), and artificial neuro-fuzzy inference systems (ANFIS) will be introduced. Applications of intelligent control system to autonomous robots, flight control and other intelligent machines will be presented.

**EECE 7230. ADAPTIVE FILTERING AND STOCHASTIC CONTROL SYSTEMS. (3)** Wiener filter theory, linear prediction, adaptive transversal filters using gradient-vector estimation, Kalman filter theory and its applications to transversal filters, method of least squares, adaptive transversal filters using recursive least squares, design of adaptive estimator and control systems. Prereq: Graduate standing.

## MECHANICAL ENGINEERING

**MEEN 5010. INTRODUCTION TO MANUFACTURING. (3)** Traditional and non-traditional manufacturing concepts, processes, and practices including: engineering metrology, quality assurance, inspection, human-factors in manufacturing, safety, product reliability, industrial robots, group technology, and cellular manufacturing. Laboratory Projects Required.

**MEEN 5020. OPTIMIZATION METHODS FOR ENGINEERING DESIGN. (3)** Computerized design methods for optimization techniques. Formulation of optimization. Problems using design variables and design constraints. Constrained and unconstrained minimization techniques using gradient and direct methods, special redesign directions for simplified analysis.

**MEEN 5030. ARTIFICIAL NEURAL NETWORKS. (3)** This course introduces one of the parallel processing techniques: Artificial Neural Networks (ANN). Introduction to neural networks, biological inspiration, definitions, comparison with conventional digital computers, vector mapping, classification of neural networks based on the input, paradigms, self-adaptions and learning algorithms, mapping networks and their architectures. Applications to power systems, control systems, communications, signal Processing, quality control, and robotics. Prerequisite: Sound knowledge of any higher-level language. (C, Pascal or Fortran) or consent of the instructor.

**MEEN 5040. VIBRATIONS ANALYSIS. (3)** Undamped and damped vibrations for one and multi-degrees of freedom, solutions for transient and forced vibrations in lumped parameter systems, vibration control treatments, noise control and experimental techniques.

**MEEN 5050. ENERGY CONSERVATION SYSTEMS. (3)** Energy needs; solar energy collection; principle of nuclear power plants; direct energy conversion; thermodynamic analysis and design of direct energy conversion devices, e.g., fuel cells, thermoelectric, photovoltaic and magnetohydrodynamic (MHD) power generators and systems.

**MEEN 5100. THEORY OF ELASTICITY AND APPLICATIONS. (3)** Analysis of stress and strain in two and three dimensions, constitutional relation between stresses and strains, Hooke's law, stress functions, strain potentials, two dimensional problems in rectangular and polar coordinates. Torsion, bending of bars, axisymmetric stress and deformation in solid, and thermal stress. Prerequisite: CVEN 3120.

**MEEN 5110. THEORY OF PLASTICITY AND APPLICATION. (3)** Elastic vs plastic deformation, general theories and approach to stress analysis, Tresca and von Mises' yield criteria, Prandtl-Reuss and other plastic stress-strain relations, work-hardening, plastic instability, strain rate and deformation, slip line field theories, load bounding and applications in engineering design. Prerequisite: CVEN 3120.

**MEEN 5130. FLEXIBLE MANUFACTURING SYSTEMS. (3)** Introduction to Flexible Manufacturing Systems including: flexible and hard-automation, robotic systems, automated guided vehicles, programmable controllers, automated storage and retrieval systems, flexible end-of-arm tooling, sensors, machine visions, and flexible manufacturing integration. Design Projects Required.

**MEEN 5200. ADVANCED DYNAMICS. (3)** Relative motion, transformation of coordinates, dynamics of system of particles, analytical mechanics, holonomic and non-holonomic constraints, virtual displacements and virtual work, D'Alembert's principle, Hamilton principles, Lagrange's equation, Rigid body geometry, rigid body dynamics.

**MEEN 5310. DYNAMICS AND THERMODYNAMICS OF COMPRESSIBLE FLUID FLOW. (3)** One-dimensional isentropic flow, shock waves, flow in constant air ducts with friction, flow in ducts with heating or cooling and generalized one-dimensional continuous flow. Applications of theory to the design of compressible flow systems, e.g. wind tunnels, gas pipelines, etc. Prerequisite: CVEN 3100.

**MEEN 5400. CONDUCTION AND RADIATION HEAT TRANSFER. (3)** Steady, periodic, and transient heat conduction in single and multidimensional systems. Both analytical and numerical methods are presented. Properties and laws of radiation, absorbing and emitting media and radiant exchange between surfaces separated by non-participating media. Problems involving combined radiation and conduction. Applications of theory to the design of engineering systems, e.g., cooling fins, heat shields, etc. Prerequisites: MEEN 4150 and MATH 3120.

**MEEN 5410. CONVECTION HEAT TRANSFER. (3)** Fundamental principles – conservation laws, parallel and boundary layer flows, scale analysis, similarity solutions, external and internal flows, laminar and turbulent convection, forced and free convection. Analogy between momentum and heat transfer. Prerequisites: MEEN 4150 and MATH 3120.

**MEEN 5420. ADVANCED THERMODYNAMICS. (3)** Basic laws of classical thermodynamics, power, refrigeration, and heat pump cycles, introduction to real gas and equations of state. Irreversibility, availability, energy, and lost work analysis. Development of the relations of classical thermodynamics. Prerequisites: MATH 3120 and ENGR 2010.

**MEEN 5780. FINITE ELEMENT ANALYSIS. (3)** Theoretical basis of the finite element method. The physical and mathematical modeling using various elements. The applications of the method to various engineering problems. The generation of the finite element program.

**MEEN 5820. PRINCIPLES OF DESIGN. (3)** Development of design theories; design for manufacturability; evaluation of design; redesign principles; case studies.

**MEEN 5610. COMPUTER-AIDED DESIGN AND MANUFACTURING. (3)** Introduction to various topics related to computer-aided design (cad), computer-aided manufacturing (cam), computer-aided engineering (cae), computer-integrated manufacturing (cim), finite element modeling and analysis (fem), and manufacturing information processing (mip). Laboratory Projects required. Prerequisites: Sound knowledge of any CAD engineering design software or consent of the instructor.

**MEEN 5620. DESIGN FOR MANUFACTURABILITY. (3)** Design of products; Decision Making in Design, Form and Functions Interchange, Design for Manufacturability, Design axioms, Robust Design, and Optimum Design. Laboratory Design Projects Required.

**MEEN 5630. MANUFACTURING MANAGEMENT AND CONTROL. (3)** Introduction to theories and practices of manufacturing management. General management techniques discussed include: organizational planning, logistic control, Inventory management, manufacturing information processing and safety. Laboratory Projects Required.

**MEEN 5640. MANUFACTURING MODELING AND SIMULATION. (3)** Introduction to queue theory and manufacturing system modeling including: machine time-history analysis and modeling, machine performance modeling, evaluation of simulation models, discrete-event programming, and autoregressive modeling and simulation. Laboratory Projects required. Prerequisites: Sound knowledge of any higher-level language. (C, Pascal or FORTRAN) or consent of the instructor.

**MEEN 5650. PREDICTIVE AND PREVENTIVE MAINTENANCE. (3)** Introduction to predictive and preventive maintenance of electromechanical systems. Prediction of failure of machine components, practical techniques for detection and prevention of machine failure. Data acquisition and Signal processing. Laboratory Projects Required. Prerequisites: Familiarity with the subject of vibration control in mechanical systems or consent of the instructor.

**MEEN 5660. CONCURRENT MANUFACTURING. (3)** Introduction to concurrent manufacturing and life-cycle engineering. Design conceptualization to product retirement including life-cycle engineering, design for recycleability, design for testability, design for serviceability, design for assembly, design for disassembly, and design for functionality. Laboratory Design Projects Required.

**MEEN 6430. MANUFACTURING DIAGNOSIS AND PROGNOSIS TECHNIQUES. (3)** Techniques for effective machinery fault diagnosis and prognosis, signal condition, filtering, and processing, signature analysis, fault pattern recognition and classification, fatigue characterization, and life prediction using artificial intelligence techniques.

**MEEN 6450. TRANSPORT PHENOMENA IN MANUFACTURING. (3)** Energy, momentum and mass transports encountered in typical engineering applications. Gas-liquid, two-phase flow patterns, basic and empirical models; conservation equations and closure relations, phase change, aerosol transport, Approximate solutions and numerical simulation techniques.

## GRADUATE FACULTY

### ARCHITECTURAL ENGINEERING

Gourang Banik, Professor and Chair

B.S., 1983; M.S., 1987, Bangladesh University, Ph.D., 1998, Iowa State University.

### CIVIL ENGINEERING

Deo Chimba, Assistant Professor; B. Sc., 2002, University of Dar es Salaam; M.S. 2004 Florida State University; Ph.D. 2008, University of Miami.

Farouk Mishu, Professor

B.S., 1964, Al-Hakima University; Ph.D., 1974, Strathclyde University

Paily Paily, Professor

B.S., 1966, University of Kerala; M.S., 1969, Vikram University; Ph.D., 1974, University of Iowa

Roger Painter, Associate Professor  
B.S., 1986, University of Tennessee; M.S., 1989, University of Tennessee Space Institute; Ph.D., 1992, Tennessee Technological University

### COMPUTER SCIENCE

Wei Chen, Professor  
B.S., 1982, Shanghai Marine Institute; M.S., 1991, Osaka University; Ph.D., 1994, Osaka University

Matthew Hayes, Assistant Professor  
B.S., 2005, University of Louisiana; M.S., 2008, University of Louisiana; Ph.D., 2013, University of Louisiana

Erdem Erdemir, Assistant Professor  
B.S., Bogazici University (Turkey); M.S., Bogazici University (Turkey); Ph.D., 2012, Vanderbilt University

Kamal Al Nasr, Assistant Professor  
B.S., 2003, Yarmouk University (Jordan); M.S., 2009, New Mexico University; Ph.D., 2012, Old Dominion University

Tamara Rogers, Associate Professor  
B.S., 1993, Vanderbilt University, M.S., 1995, Vanderbilt University, Ph.D., 2003, Vanderbilt University

Ali Sekmen, Professor and Chair  
B.S., 1995, M.S., 1997, Bilkent University (Turkey); Ph.D., 2000, Vanderbilt University, Ph.D., 2012, Vanderbilt University

Fenghui Yao, Professor  
B.A., 1984, Dalian Maritime University (China); M.E., 1988, Ph.D., 1992, Kyushu Institute of Technology (Japan)

### ELECTRICAL ENGINEERING

Satinderpaul Singh Devgan, Professor and Chair  
B.Sc., 1961, Panjab University; M.S., 1965, Ph.D., 1970, Illinois Institute of Technology

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

S. Jeffrey Fan, Associate Professor  
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Liang Hong, Professor  
B.S., 1994, M.S., 1997 Southeast University, Ph.D., 2002, University of Missouri-Columbia

Lee Keel, Professor  
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Dhananjaya Rao Marpaka, Associate Professor  
B.S., 1975, M.S., 1979, Osmania University; M.S., 1986; Ph.D., 1990, Florida Institute of Technology

Sachin Shetty, Assistant Professor  
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Mohamed Saleh Zein-Sabatto, Professor  
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### MECHANICAL ENGINEERING

Muhammad Akbar, Assistant Professor,  
B.Sc., 1995, Bangladesh University of Eng. & Tech.; M.Sc., 2001, University of Alabama; Ph.D., 2004, Georgia Inst. of Tech

Hamid R. Hamidzadeh, Professor and Chair  
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

Woong Yeol Joe, Assistant Professor  
B.Sc., 2000, Hongik University, Seoul, Korea, M.Sc., 2003, Korea University, Seoul, Korea, M.Sc., 2006 Polytechnic University, Ph.D., 2010 Columbia University.

Landon C. Onyebueke, Professor  
B.S. 1982, University of Ibadan, Nigeria, M.S. 1986, Ph.D. 1989, Institut National Polytechnique de Lorraine

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



# **COLLEGE OF HEALTH SCIENCES**

# COLLEGE OF HEALTH SCIENCES

**Stephanie Bailey, MD-MPH, Interim Dean**  
**162 Clement Hall**  
**(615) 963-5927**  
[sbaile11@tnstate.edu](mailto:sbaile11@tnstate.edu)

## General Statement

The College of Health Sciences is committed to preparing tomorrow's healthcare leaders. The purpose of the College is to offer educational programs designed to produce practitioners and prepare individuals who are interested in pursuing careers as educators in the health professions; to encourage, develop and support interest in research; and to provide health care, when appropriate, and continuing educational services to the community.

## Objectives

The objectives of the College of Health Sciences are:

1. To develop and implement educational programs designed to graduate health practitioners and educators based on employment demands and the availability of resources.
2. To recruit students interested in careers in the health care field in programs offered in the College and to provide these students with career counseling, academic advisement, and tutoring designed to assist them in achieving career goals.
3. To maintain full accreditation by appropriate agencies for all programs offered by the College.
4. To recruit and retain a faculty capable of making significant contributions to the basic and applied research efforts of the supporting institutions.
5. To encourage and promote the rendering of service to the community through the sponsorship of seminars, workshops, consultations, and the delivery of health care whenever appropriate.
6. To identify and develop the talents of students whose prior educational and cultural experiences have heretofore prevented them from participating in allied health careers.

In addition to the Doctor in Physical Therapy, Master of Science in Speech and Hearing Science, Master of Public Health, Master of Arts in Education (Human Performance and Sport Sciences), Master of Science in Nursing, and Master of Occupational Therapy, the College offers undergraduate degrees in:

- Cardio-respiratory Care Sciences
- Dental Hygiene
- Health Care Administration and Planning
- Health Information Management
- Health Sciences
- Human Performance and Sport Sciences
- Nursing

**DEPARTMENT OF**  
**HUMAN PERFORMANCE AND SPORT SCIENCES**  
**James E. Heimdal, Department Chair**  
**Office: 332 Gentry Center**  
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**MAJOR: HUMAN PERFORMANCE AND SPORT SCIENCE**  
**CONCENTRATIONS (2):**

**EXERCISE SCIENCE**  
**SPORT ADMINISTRATION**

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

NOTE: Those interested in Teacher Education Certification in conjunction with an HPSS Graduate Degree should contact the Teacher Education Department within the College of Education..

## Student Learning Outcomes:

- i. All graduate candidates will be able to collect, analyze, and interpret data.
- ii. All graduate candidates will communicate ideas clearly in oral, written speech, and hands on modalities.
- iii. All graduate candidates will prepare independent research projects for appropriate field.
- iv. All graduate candidates will gain knowledge, skills, and abilities to become leaders in their selected field of study.

## Admission Requirements

Unconditional admission to the program requires the applicant to have a bachelor's degree from an accredited four-year college or university, an undergraduate cumulative GPA of 2.5 or better on a 4.0 scale with a minimum score of 137 on the Verbal Reasoning and a minimal score of 138 on Quantitative Reasoning sections of the Graduate Record Examination (GRE), or 370 on the Miller Analogies Test (MAT).

Unconditional 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 145 on the Verbal Reasoning section and 146 on the Quantitative Reasoning or the MAT score must be 383. If the GPA is between 2.0 and 2.24, the GRE score must be 149 on the Verbal Reasoning and 150 on the Quantitative, or the MAT score must be 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that the submit test scores at the time of original application. The student must remove conditional status by earning at least a B (3.0) average in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program. Candidacy cannot be attained until the full requirements for unconditional admission are met.

At least eighteen (18) hours of prerequisite study in Health, Physical Education, Recreation or a closely related field must be completed prior to admission to the program.

**Degree Requirements**

1. The M.A.Ed. Degree requires a minimum of thirty (30) semester hours of study including nine (9) hours of Major Core courses, and nine hours of Concentration Core courses. The remaining hours are guided electives chosen from the selected concentration with the consent of an advisor.
2. Students who elect to write a thesis or project are encouraged to enroll in HPSS 5120 or HPSS 6020 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 pass a comprehensive examination prior to graduation.
4. Students must maintain a cumulative 3.0 GPA or better to remain in good standing.

**EXERCISE SCIENCE**

## Major Core - (9 hours)

EDAD 5110	Research and Statistics	3
HPSS 5050	Sports and School Law	3
HPSS 5130	Tech. Cog. & Kin. App.	3
Concentration Core - (9 hours)		
HPSS 5010	Intro. to Epidemiology	3
HPSS 5350	Adv. Exercise Physiology	3
HPSS 5370	Fitness Evaluation & Assessment	3
Field Experience -		(3 hours min)
HPSS 5920	Administrative Practicum and/or	3
HPSS 5930	Internship	3

## Exercise Science Guided Electives - as Approved by Advisor

HPSS 5310	Aging & Wellness	3
HPSS 5320	Wellness for Special Populations	3
HPSS 5330	Sports Psychology	3
HPSS 5360	Body Composition & Assessment	3
HPSS 5400	Athletic Injury and Evaluation	3
HPSS 5470	Sports Nutrition	3
HPSS 5600	Sport Facilities Design & Management	3
HPSS 5700	Special Topics	3
HPSS 5910	Independent Study	3
HPSS 5920	Administrative Practicum	3
HPSS 6020	Project	3

## Required Exercise Science Internship

Students are required to complete 225 clock hours of on-site field experience and practice during the semester of internship experience: **HPSS 5930 Internship.**

**SPORT ADMINISTRATION**

## Major Core - (9 hours)

EDAD 5110	Research and Statistics	3
HPSS 5050	Sports and School Law	3
HPSS 5130	Tech. Cog. & Kin. App.	3
Concentration Core - (9 hours)		
HPSS 5500	Problems in Sport Management	3
HPSS 5510	Financial Administration of Sport	3
HPSS 5800	Strategic Management	3

Field Experience		(3 hours)
HPSS 5920	Administrative Practicum and/or	3
HPSS 5930	Internship	3

## Sport Administration Guided Electives - as Approved by Advisor

HPSS 5600	Sport Facilities Design & Management	3
HPSS 5620	Sport Marketing & Public Relations	3
HPSS 5650	Sport Policies & Procedures	3
HPSS 5700	Special Topics	3
HPSS 5910	Independent Study	3
HPSS 5920	Administrative Practicum	3
HPSS 6020	Project	3

**Required Sport Administration Internship**

Students are required to complete 225 clock hours of on-site field experience and practice during the semester of internship experience: **HPSS 5930 Internship.**

**Notes:**

1. Other courses may be selected with the approval of the departmental advisor.
2. Option of one of the following: Comprehensive Exam, Thesis, or Project

**COURSE DESCRIPTIONS**

**HPSS 5010. Introduction to Epidemiology (3)** This course is designed to study factors influencing health and disease in a population. Relationships between host and environment will also be studied. Application of the principles of epidemiologic methods and data will be collected, investigated, analyzed, and interpreted with an emphasis on prevention and control.

**HPSS 5050. Sports and School Law (3)** Development of administrative considerations and methods from the legal perspective influenced by statutes and contemporary litigation.

**HPSS 5120. Thesis Writing (3)** Designed to assist students in the selection and adequate conduct of research problems in the area of health education, physical education, or recreation. Credit is given upon completion of the research problem and the passing of the oral examination.

**HPSS 5130. Techniques of Cognitive & Kinetic Appraisal (3)** Designed to acquaint the student with the role of tests and measurement in a total program of physical education.

**HPSS 5310. Aging & Wellness (3)** Exploration of the social, cognitive, affective and physiological processes in humans and aging. Attention will be given to family and social dynamics, accommodations for disabilities, and legal / financial issues.

**HPSS 5320. Wellness for Special Populations (3)** Provides the professional with an understanding of theoretical and applied aspects of wellness programming for special populations, and their functional capacity with regard to wellness programming.

**HPSS 5330. Sports Psychology (3)** Surveys current psychological research and interventions for human performance including social facilitation, aggression, and motivation.

**HPSS 5350. Advanced Exercise Physiology (3)** Regulation and adjustment of physiological systems during acute exercise and adaptations to chronic exercise in various populations and environments; emphasizes discussion intended to reinforce principles of physiological phenomena and underlying mechanisms.

**HPSS 5360. Body Composition & Assessment (3)** Laboratory and field assessment of body fat, lean body mass and somatotype, anthropometry; body build and composition; exercise and dietary regulation of obesity and chronic underweight.

**HPSS 5370. Fitness Evaluation & Prescription (3)** Application of physiological assessment techniques to evaluate human performance; interpretation of results, and recommendation for corrective remediation protocols.

**HPSS 5400. Athletic Injury & Evaluation (3)** Comprehensive survey of human structure of the trunk, upper and lower extremities, and their relationship to injuries; implications for rehabilitation and post-surgical therapeutic exercise programs.

**HPSS 5470. Sports Nutrition (3)** Application of nutritional principles, physiology and biochemistry of nutrients and nutrient homeostasis in humans at the cellular, tissue, organ and system level as related to exercise and human performance.

**HPSS 5500. Problems in Sport Management (3)** Examination of problems confronting administrators; theoretical models of moral and ethical development will be examined; codes of ethics and case studies will be analyzed to develop a framework for problem solving. An examination of leadership styles, philosophies, and practices in contemporary settings and the evolution of leadership will also be examined.

**HPSS 5510. Financial Administration of Sport (3)** A study of fundamental concepts and theories of conventional income sources used to generate revenue for sport organizations. Innovative revenue generating methods will be discussed.

**HPSS 5600. Sport Facilities Design & Management (3)** Principles of planning facilities for sport, physical education, and recreation; relationship of facilities to programs; budgeting, financing, and construction oversight.

**HPSS 5620. Sport Marketing & Public Relations (3)** Practical application of the principles of marketing, publicity, and public relations for use in sport and recreation. Class project may entail working with local agency for a sport marketing campaign.

**HPSS 5650. Sport Policies and Procedures (3)** Analysis of sport governing organizations such as IOC, NCAA, NFHS, TSSAA, and others; requirements for membership, compliance, and examination of the rules and penalties assessed.

**HPSS 5700. Special Topics (3)** Covers a diverse selection of topics, issues, and complex problems that confront practitioners. Efforts will be made to explore new paradigms, encourage independence of thought, seek pro-active problem resolution, and develop critical thinking abilities.

**HPSS 5700. Special Topics (3)** Covers a diverse selection of topics, issues, and complex problems that confront practitioners. Efforts will be made to explore new paradigms, encourage independence of thought, seek pro-active problem resolution, and develop critical thinking abilities.

**HPSS 5710. Curriculum, Instruction & Supervision (3)** Practical methods and materials employed in the testing of play activities, fundamental skills, and athletic games are emphasized. Program evaluation and improvement, facilities and equipment, as well as criteria for determining their adequacy, are stressed. An examination of the design, construction, improvement, and evaluation of curriculum in physical education will be incorporated.

**HPSS 5800. Strategic Management (3)** Examines the processes for planning, growth, development, expansion and management in sport through technical and professional applications of strategic management principles.

**HPSS 5910. Independent Study (3)** Designed to provide opportunities to make an intensive in-depth study of an area of interest selected by the student in health, physical education, or recreation. Organized as an independent study experience, the selected project should be centered around some problem or area of interest related to the student's administrative, teaching, or leadership responsibilities.

**HPSS 5930. Internship (3 - 6)** A planned and supervised professional internship allowing students to apply theoretical concepts in practical applications. Three credit hours will require 250 clock hours spent as interns. Directed and evaluated by faculty advisor.

**HPSS 6020. Project (3)** A terminal course centered around action research or applied research in the area of the candidate's professional responsibilities. The course requires an oral examination at conclusion of the written project.

## GRADUATE FACULTY

Essameldin R. Hamido, Associate Professor

B.S., 1988, Ain Shamps University; M.A.Ed., 1996, Ed.D. 1999, Tennessee State University

James E. Heimdal, Associate Professor and Department Chair

B.A., 1980, Tulane University; M.Ed., 1998, University of New Orleans; Ph.D., 1992, University of Southern Mississippi

Harriet Hamilton, Associate Professor

B.S., 1975, Fisk University; M.S., 1976, Florida State University; Ed.D. 2003, Temple University

William E. Johnson, Associate Professor

B.S., 1980, California Polytechnic State University; M.A., 1981, Stanford University; 1993, The University of New Mexico

Timothy Jones, Assistant Professor

B.S., 1993, Ohio University; M.S., 1995, Frostburg State University; Ed.D., Tennessee State University

Jason Smith, Assistant Professor

B.S., 2000, Tennessee State University; MA.Ed., 2003, Tennessee State University; Ed.D, Tennessee State University

Blair Thornton, Assistant Professor

B.S., 2003, West Virginia Wesleyan College; M.S., 2005, James Madison; Ph.D, 2008, University of Kansas

**DIVISION OF NURSING**  
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**MAJOR: NURSING**  
**DEGREE: MASTER OF SCIENCE IN NURSING (MSN)**  
**CONCENTRATIONS:**  
**NURSING EDUCATION**  
**HOLISTIC NURSING**  
**FAMILY NURSE PRACTITIONER**

**(Additional concentrations available through the MSN Regents Online Campus Collaborative <http://www.rodpc.org/>)**  
**Office: 318, Frederick S. Humphries**  
**Phone: (615) 963-5252**

The Division of Nursing offers a Master of Science in Nursing (MSN) degree with three concentrations that include Family Nurse Practitioner, Holistic Nursing, and Nursing Education. The MSN program provides a flexible and blended curriculum with online, daytime and evening courses. Many courses are provided online and the Master of Science in Holistic Nursing degree is offered totally online as a distance program. The Master of Science concentration in the Family Nurse Practitioner specialty prepares the individual for advanced nursing practice across the family continuum, and educationally prepares the graduate for future certification as a FNP. Nursing Education is designed and developed to provide students the opportunity to obtain the theory, skill and experience to teach within the college or university setting or within the education department of a clinical facility. Graduates of the Nursing Education concentration are educationally prepared for future certification as nurse educators. The Holistic Nursing concentration is designed to prepare the graduate with a foundation for delivering advanced holistic care to individuals and families, including the use of complementary and alternative healing health therapies. Graduates of the Holistic Nursing concentration are educationally prepared for future certification in holistic nursing.

Additionally, Tennessee State University Division of Nursing participates in cooperation with the Regents Online Campus Collaborative (ROCC), to offer an online Master of Science in Nursing Degree through a collaborative consortium consisting of six universities with concentrations in Nursing Education, Family Nurse Practitioner, Nursing Informatics, and Nursing Administration.

ROCC students assigned to TSU as their home school will need to meet all admission requirements to the TSU Graduate School and TSU Division of Nursing. The web site at <http://www.rodpc.org/> will provide more information to interested students about the Master of Science in Nursing Regents Online Campus Collaborative. The table below delineates program specifics for both Tennessee State University and RODP processes.

Division of Nursing Tennessee State University	Regents Online Degree Program (RODP)
Program Accreditation	Regents Online Campus Collaborative (ROCC)
Accredited by the Accreditation Commission for Education in Nursing (ACEN)	Program Accreditation
Application Process	Accredited by the Accreditation Commission for Education in Nursing (ACEN)
Students are admitted three times each year by application to the Graduate School. Deadlines for admission are February 15 for summer term, June 15 for fall term, and October 15 for spring term.	Application Process
	Students are referred monthly to their respective home school universities. Letters notifying students of their assigned school instruct the student to make application to the Graduate School of that institution.
Admission Criteria	Deadlines for admission application are the same as for the Division of Nursing TSU.
Bachelors of Science in Nursing with an overall GPA of 3.0 on a 4.0 scale.	Admission Criteria
An unencumbered license to practice as a Registered Nurse in Tennessee or the state in which clinical assignments are requested.	Bachelors of Science in Nursing with an overall GPA of 3.0 on a 4.0 scale. Consideration is given to students with grade point averages below 3.0 for conditional admission pending space availability.
	An unencumbered license to practice as a Registered Nurse in Tennessee or the state in which the clinical assignments are made.
Curriculum Requirements by Concentration	Curriculum Requirements by Concentration
Family Nurse Practice – 43 hours	Family Nurse Practice - 46
Nursing Education – 45 hours	Nursing Education - 39
Holistic Nursing – 45 hours	Nursing Administration - 36
Clinical Requirements	Clinical Requirements
Students must identify potential preceptors and clinical affiliation agreements must be fully executed prior to registering for a clinical or practicum course. Clinical experience may not begin until the student receives notice of preceptor approval and full execution of an affiliation	Students must identify potential preceptors and clinical affiliation agreements must be fully executed prior to registering for a clinical or practicum course. Clinical experience may not begin until the student receives notice of preceptor approval and full execution of an affiliation

agreement.  A criminal background check, drug screening, documentation of health immunizations, professional liability insurance, and health insurance are required for all students participating in clinical assignments. Students are expected to cooperate fully with the process and pay all associated costs.	agreement.  All students entering the program will be required to provide a criminal background check, drug screening, documentation of health immunizations, professional liability insurance, and health insurance prior to the start of their preceptorship within 90 days of their first clinical day. Proof of compliance and purchase will be uploaded in the Medatrax system. Students are expected to cooperate fully with the process and pay all associated costs.
Dual Concentrations	Dual Concentrations
TSU students may complete a degree in one concentration, i.e. no dual concentrations are allowed. The Graduate School accepts their candidacy forms for the degree after completing nine (9) semester hours of coursework. After completion of a MSN, the student may complete a Post Master's Certificate in any of the three concentration areas.	No dual concentrations are allowed in the MSN RODP program. Students who seek them are advised to pursue a Post Master's Certificate. Certificates are offered in all four of the concentration areas.

### Statement of Purpose

The curriculum of the Masters of Science in Nursing (MSN) program is based on the philosophy of the University and the Division of Nursing. The purpose of the master's degree program is to prepare nurses for advanced clinical practice and for nursing leadership and teaching positions in both university and alternative/complimentary clinical 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 cover advanced practice nursing roles, holistic health care, theory, evidence based practice, ethical, legal, and policy health care issues, and nursing education theory and practice.

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. The master's program provides the foundation for doctoral study.

The MSN Program is accredited by the Accreditation Commission for Education in Nursing (ACEN), The ACEN may be contacted at 3343 Peachtree Road, NE, Suite 850, Atlanta, GA 30326, 404-975-5000, [www.acenursing.org](http://www.acenursing.org). The program also holds full approval status by the Tennessee Board of Nursing, which can be reached at 665 Mainstream Drive, 2<sup>nd</sup> Floor Nashville, TN 37243, 615-532-5166.

### Program Outcomes

The MSN Program will:

1. Facilitate successful student completion of the selected program of study.
2. Prepare graduates for successful certification at the national level.
3. Achieve alumni satisfaction with the program in preparing the graduate for selected roles.
4. Achieve employer satisfaction with graduate preparation for entry-level positions.
5. Facilitate graduate employment as related to the role preparation provided.

### Student Learning Outcomes

Upon completion of the MSN Program, the student will be able to:

1. Conduct comprehensive and systematic assessments as a foundation for decision- making.
2. Transfer and apply knowledge of illness and disease management for the provision of safe evidence-based care to diverse populations.
3. Synthesize epidemiological, social, and environmental data in drawing inferences regarding the health status of various populations and interventions to promote and preserve health and healthy lifestyles.
4. Operationalize knowledge and skills in education, economics, business principles, and systems in the evaluation of interventions.

### Graduate Role Specific Competencies

Upon completion of the selected concentration within MSN Program, the student will be able to:

Family Nurse Practitioner Concentration:

1. Utilize clinical guidelines to improve the delivery of evidence based quality care across the lifespan.
2. Demonstrate effective care to populations across the lifespan for the individual and family.
3. Safely prescribe medications with knowledge of altered pharmacodynamics and pharmacokinetics with special populations such as infants, children, pregnant and lactating women, adults and older adults.

Nursing Education Concentration:

1. Demonstrate effective development of curriculum which integrates sound educational principles, theory and research.
2. Effectively apply a variety of evidence based teaching strategies appropriate to learner needs, desired learner outcomes, content, and context.
3. Implement evidence based assessment and evaluation strategies that are appropriate to the learner and to learning outcomes inclusive of cognitive, psychomotor, and affective domains.

### Holistic Nursing Concentration:

1. Recognize the totality of the human being and how this influences healing, patient care, and patient self-care.
2. Integrate self-care, self-responsibility, spirituality, and reflection in their lives allowing a greater awareness of the interconnectedness and its relationship to the healing process.
3. Provides leadership in holism for health care providers and systems.

### Admission

Students in the graduate nursing program must meet the university admission, candidacy, and graduation requirements as listed in the Graduate Catalog, as well as admission requirements to the MSN Program. Students should review the Graduate Catalog for university requirements and policies. Admission to the program occurs each summer, fall, and spring semester.

Applicants who have completed graduate level nursing courses at another institution 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.

Students interested in applying through the ROCC MSN consortium should follow the application process as delineated on the MSN ROCC website ([www.rodop.org](http://www.rodop.org)) and must be assigned to TSU as their home school.

### Transfer of Graduate Level Nursing Courses

Students transferring from another graduate nursing program must submit a transcript and a letter of good standing from the dean/director of the previous nursing program. Graduate level nursing courses completed at other institutions, with grades of at least “B” will be evaluated on an individual basis. A maximum of twelve (12) hours may be transferred with approval, but must have been taken within six (6) years of the anticipated graduation date from Tennessee State University.

### Application Materials

Applicants should submit all the required application materials to the Graduate School by February 15th for summer admission, June 15th for fall admission, and October 15<sup>th</sup> for spring admission.

Required materials include:

1. Completed Graduate School Application with fee,
2. Three completed reference forms,
3. Official transcripts from all previous colleges,
4. Resume and copies of current unencumbered Tennessee RN license, certifications, professional organization memberships, and BLS health provider certification. A criminal background check and drug screen, student professional practice liability insurance, and health insurance are required before starting clinical courses.

5. A written statement of professional goals, upon completion of the MSN degree, maximum of one (1) page, double spaced and typed. This section must specifically include your choice of program (TSU Division of Nursing or RODP), and the specialty you wish to pursue (FNP, Nursing Education, Holistic Nursing, etc.),
6. Documentation of current professional nursing experience/resume,
7. Personal record of health immunizations.

### Plan of Study Appointment

An appointment with the student’s designated faculty advisor is required (by phone, email, or in person) prior to enrollment in the first class and each semester thereafter in order to create and review a plan of study for each student.

### Requirements for Unconditional Admission to the MSN Program

Admission to the program will be based on space availability through competitive selection from the pool of applicants.

Requirements for unconditional admission are:

1. Admission to Tennessee State University as a MSN degree seeking student.
2. Graduation from an NLNAC, ACEN, or CCNE accredited baccalaureate nursing program, with an overall GPA minimum of 3.0 or higher (on a 4.0 scale) is required.
3. A current unencumbered Tennessee R.N. license (or the state in which clinical will be completed).
4. Submission of all materials required within the MSN Program application packet.

Requirements for Unconditional Admission to the Post MSN Certificate Program

1. Admission to Tennessee State University.
2. Graduation from an NLNAC, ACEN, or CCNE accredited master’s or doctoral program in nursing.
3. An overall graduate level GPA minimum of 3.0 or higher on a 4 point scale is required for admission for a post master’s certificate.
4. A current unencumbered Tennessee R.N. license (or the state in which clinical will be completed).
5. Submission of all materials required within the MSN Program application packet.

### Requirements for Conditional Admission to the MSN Program

Students who do not meet the unconditional admission requirements may be considered for conditional admission pending space availability if they can demonstrate graduate potential by other means.

1. Admission to Tennessee State University as a MSN degree seeking student.
2. Graduation from an NLNAC, ACEN, or CCNE accredited baccalaureate nursing program with an overall GPA minimum of 2.5 or higher (on a 4.0 scale) is required.
3. A current unencumbered Tennessee R.N. license (or the state in which clinical will be completed).
4. Submission of all materials required within the MSN Program application packet.

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

- Completion of 9 semester credit hours of graduate course work from the MSN curriculum with an overall GPA of 3.0 or higher.

### **PROCESS FOR CHANGE OF STATUS FROM CONDITIONAL TO UNCONDITIONAL ADMISSION**

Students must meet all the requirements for transition from conditional to unconditional admission before taking courses beyond nine hours in the major. Students who have completed this requirement are reviewed by the Admission Committee to be approved for change of status.

### **SPECIAL REQUIREMENTS**

Special requirements before entering the MSN clinical courses include record of health immunization, current Health Care Provider-BLS certification, student liability insurance, and personal health insurance. An agency approved criminal background check and drug screening are required before starting clinical courses.

#### **Criminal Background Checks and Drug Screening**

A criminal background check and drug screening are required. Based on the results of these checks a clinical site may determine not to allow a student-at their facility. This could result in the inability to successfully complete program requirements. Additionally, a criminal background may preclude licensure, certification, or employment. Students are expected to cooperate fully with the process and pay all associated costs. Tennessee State University and the Division of Nursing are not liable if the results of a criminal background check or a drug screening indicates that a student is unable to complete the requirements of the program or if such results preclude one from obtaining licensure or employment.

#### **Retention and Progression**

A grade of B or higher denotes successful completion of a course within the MSN Program. Within the MSN Program, a student may receive a grade of C one time within their program of study and be allowed to repeat the course one time to achieve a B or higher. The receipt of a second grade of C in the repeated or any other nursing course, or any single grade of D or F within a nursing course will result in the student being ineligible to progress or remain in the program. In addition to the MSN Program Retention and Progression Policy, each student is required to comply with the Graduate School Retention Policy.

In order to graduate, students must have a minimum 3.0 grade point average overall and in the program of study. When the cumulative grade point average falls below 3.0, the graduate student will be placed on academic probation. If the student does not achieve a 3.0 cumulative grade point average at the conclusion of one probationary semester, the Dean of the Graduate School and appropriate college/department/program officials will determine whether the student should be dismissed from the graduate school or continued on probation. No student will be allowed more than two probationary semesters, whether consecutive or cumulative. At the end of a second probationary semester a student whose cumulative grade point average is still below 3.0 will be dismissed from the graduate school. A student will be removed from probationary status upon attaining a cumulative 3.0 grade point average.

Academic disqualification from the graduate nursing major will also occur when the student:

- Willfully misrepresents preceptor evaluations; patient data; patient or preceptor data, or any record related to clinical practice
- Engages in clinical activity prior to faculty approval of the preceptor or a fully executed clinical affiliation agreement is completed and the student notified
- Places any patient or individual in the clinical setting in physical or emotional jeopardy
- Is placed on probation by the Tennessee Board of Nursing
- Fails to disclose a felony conviction
- Fails to disclose disciplinary action or diversion by the Tennessee Board of Nursing
- Fails to complete all degree requirements within six (6) years of entering graduate nursing coursework

#### **Readmission**

Readmission applies to those students who have not been in continuous enrollment in the 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:

1. Complete the application form provided online by the Graduate School. Check readmission requirements in the general section of the Graduate Catalog.
2. Return the completed application form to the Graduate School.
3. The completed application materials are reviewed by the MSN Program Admissions Committee and students are notified of the outcome.

#### **Candidacy and Graduation**

Students must meet all the University Graduate School and Division of Nursing requirements for candidacy and graduation. Students must complete and file the 'Candidacy' form following the first nine hours of completed coursework. Additionally students must complete and file the Intent to Graduate form with the Graduate School the semester prior to the semester of degree completion.

All students must successfully complete a comprehensive examination as required by the Graduate School. The examination will consist of a proctored written examination for each concentration area.

**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.

**Curriculum Requirements**

All coursework within a required concentration must be completed in the prescribed sequence as indicated by pre-requisites and co-requisites. Students are required to meet with their faculty advisor before registering for courses each and every semester.

The goal of the master’s program is to prepare individuals to educate others and to prepare professional nurses with knowledge, skills, and values to provide advanced, holistic comprehensive clinical nursing care to individuals and families with complex health care problems in primary health care settings.

The FNP curriculum provides a core of specialized nursing and general knowledge as a foundation for advanced family health nursing practice.

The Holistic Nursing concentration provides in depth study of self-care, complementary and alternative therapies, healing practices, and holistic specialization.

The Nursing Education concentration is designed to provide students the opportunity to obtain the theory skill and experience to teach within the college or university setting or within the education department of a clinical facility.

Students identify and work towards achieving their individual career goals. Clinical preceptors and specialized courses assist the student to focus on the knowledge and skills needed for their area of advanced nursing practice. Graduates of the FNP program concentration are educationally eligible to become certified as family nurse practitioners. Graduates of the Holistic Concentration are educationally prepared to become certified as Advanced Holistic Nurses. Graduates of the Nursing Education concentration are educationally prepared to become certified as nurse educators.

Content is organized and sequenced to assist students to move from a general knowledge base to one that is more complex and specialized. The program consists of four (4) semesters plus one 10 week summer term of full-time study with 45 credits required for the Nursing Education concentration, 45 credits required for the Holistic Nursing concentration, and 43 credits required for the Family Nurse Practitioner concentration. A clinical or education practicum, field study, development of a Scholarly State of the Science Paper (via Project Writing Courses) and completion of a comprehensive examination are requirements of each concentration.

All students take the foundational courses first which provide advanced knowledge, experiences, and competencies in nursing research, current and emerging theories, roles, ethical decision making and management of health care information. Nursing theory and research are placed before the clinical courses in order for students to integrate knowledge and evidence into their teaching and or advanced clinical practice. Each credit hour of didactic teaching equals one 55 minute class period per week.

The allocation of course credits to theory and clinical is based on course content and objectives, and required learning activities. Clinical hours are specific to selected specialty courses and are scheduled across the designated semester(s). Students have the option of full time or part time study.

Curriculum requirements for each of the concentrations offered through the MSN ROCC Campus Collaborative are delineated on the program website (www.rodpc.org).

**Scholarly Project**

Each student in the MSN program must complete a scholarly state of the science paper as a partial fulfillment of the requirements for the completion of the degree. This paper is completed through the requirements within the Project Writing I and II courses. The initial step is the selection of a faculty approved topic on which to prepare a state of the science paper. Students must enroll in NURS 5220-I, followed by NURS 5220-II sequentially over two consecutive terms for 3 hours each semester - a total of six hours.

**PROGRAM OF STUDY**

**DEGREE: MASTERS OF SCIENCE**

- MAJOR: NURSING**
- CONCENTRATIONS:**
- Nursing Education**
- Holistic Nursing**
- Family Nurse Practitioner**

The master’s program offered by the Division of Nursing includes three concentrations: Nursing Education, Holistic Nursing, and Family Nurse Practitioner. These programs are designed to prepare advanced practice nurses for education and practice. Prior graduate work and the individual student’s interest and career goals will be considered in planning the program of study for each candidate.

**Program Courses**

**Core Curriculum Required Courses (19\* - 22 hours)**

NURS 5000	Nursing Theory	3
NURS 5020	Research in Nursing Practice	3
NURS 5040	Role Development: Theory and Practice	3
NURS 5070*	Health Policy for Advanced Practice Nurses	3
NURS 5210	Pathophysiology	3
NURS 5100	Advanced Assessment	4
NURS 5280	Pharmacotherapeutics	3

\* Not required for Nursing Education Concentration

**Concentration I: (20 hours) - Nursing Education**

NURS 5230	Organizational Operations: he Faculty Role	3
NURS 5250	The Education Process	4
NURS 5270	Curriculum Development and Implementation	5
<b>Clinical Option Courses—Choose One Specialty Group</b>		
NURS 5290	Psychiatric Nursing I	4
NURS 5300	Psychiatric Nursing II	4
Or		
NURS 5320	Adult Health Nursing I	4
NURS 5340	Adult Health Nursing II	4
Or		
NURS 5360	Women’s Health Nursing	4
NURS 5380	Pediatric Health Nursing	4

### Certificate: Nursing Education

Nurses who hold a Master of Science in Nursing degree from a nationally accredited program and are interested in continuing study in Nursing Education may be eligible to enter post graduate studies. The three pre-requisite courses required for advanced practice nursing – Advanced Assessment (4 hours), Advanced Pathophysiology (3 hours), and Advanced Pharmacology (3 hours) – will need to be completed before beginning the Nursing Education concentration and may be transferred from the previous graduate degree if completed no more than five (5) years prior to TSU enrollment. If the MSN program from which the applicant graduated did not include all three courses, the three advanced courses may be taken through Tennessee State University before beginning the Nursing Education coursework. Graduation with a post graduate certificate will require completion of Nursing 5230, 5250, 5270, and two of the clinical option courses that allow specialization in either Adult Health Nursing (5320 and 5340), or Psychiatric Nursing (5290 and 5300), or Women’s Health/Pediatric Nursing (5360 and 5380).

TSU students who choose to complete the post graduate certificate in Nursing Education following their primary MSN degree concentration in another area of study may take Nursing Education courses as the electives required for that degree. Approved electives include Nursing 5230 and 5250. To earn the Nursing Education Post Graduate Certificate, those students will continue with Nursing 5270, and two of the clinical option courses – a total of 13 additional hours to complete the requirement.

Students who hold the MSN degree from another institution in another area of advanced practice nursing will complete the five (5) Nursing Education courses required by Tennessee State University, transferring the ten (10) hours of pre-requisite courses in Assessment, Pathophysiology and Pharmacology if previously earned.

#### Concentration I: (9 hours) - Family Nurse Practitioner

NURS 5120	Advanced Family Health Nursing I	4
NURS 5140	Advanced Family Health Nursing II	5

#### Certificate: Family Nurse Practitioner

Nurses who hold a Master of Science in Nursing degree from a nationally accredited program and are interested in continuing study to become a Family Nurse Practitioner (FNP) may be eligible to enter post graduate studies. The three pre-requisite courses required for advanced practice nursing – Advanced Assessment (4 hours), Advanced Pathophysiology (3 hours), and Advanced Pharmacology (3 hours) – will need to be completed before beginning the Post Graduate Certificate requirements and may be transferred from the previous graduate degree if completed no more than five (5) years prior to TSU enrollment. If the MSN program from which the applicant graduated did not include all three courses, the three advanced courses may be taken through Tennessee State University before beginning the remaining FNP coursework. Graduation with a post graduate certificate will require completion of nursing 5120 and 5140 and the required 300 clinical hours in both courses for a total of 600 hours in clinical practice. Tennessee State University students who choose to complete the post graduate certificate for Family Nurse Practitioner following their primary MSN degree concentration in another area of study (for example either Holistic Nursing or Nursing Education) will take Nurses who hold a Master of Science

Nursing 5120 and 5140 for a total of nine (9) hours to complete the requirement. Students who hold the MSN degree from another institution in another area of advanced practice nursing will complete the nine (9) requisite hours for the FNP specialty, transferring the ten (10) hours in prerequisite courses.

#### Concentration III: (14 hours) - Holistic Nursing

NURS 5080	Holistic Nursing	3
NURS 5170	Holistic Nursing Interventions	3
NURS 5180	Advanced Holistic Nursing Practicum I	4
NURS 5190	Advanced Holistic Nursing Practicum II	4

#### Certificate: Holistic Nursing

in Nursing Degree from a nationally accredited program and are interested in continuing study in Holistic Nursing may be eligible to enter post graduate studies. The three pre-requisite courses required for advanced practice nursing – Advanced Assessment (4 hours), Advanced Pathophysiology (3 hours), and Advanced Pharmacology (3 hours) – will need to be completed before beginning the Holistic Nursing concentration and may be transferred from the previous graduate degree if completed no more than five (5) years prior to TSU enrollment. If the MSN program from which the applicant graduated did not include all three courses, the three advanced courses may be taken through Tennessee State University before beginning the Holistic Nursing coursework.

Graduation with a post-graduate certificate will require completion of Nursing 5080, 5170, 5180, and 5190. Students who choose to complete the post graduate certificate in Holistic nursing following their primary MSN degree concentration in another area of study may take Holistic Nursing courses as the electives required for the primary degree. Approved electives include Nursing 5080 and 5170. To earn the Holistic Nursing Post Graduate Certificate, those students will continue with Nursing 5180 and 5190 for a total of seven (7) additional hours to complete the requirement.

Students who hold the MSN degree from another institution in another area of advanced practice nursing will complete the fourteen (14) hours in Holistic Nursing after transferring the ten (10) pre-requisite courses.

#### Electives

Six hours of elective course work is required for the FNP concentration and 3 hours for the Holistic concentration. No elective course is required for the Education concentration. Students may select graduate courses they determine will meet their educational goals and complement the required course offerings. Approval by the nursing advisor is required.

#### Scholarly Project (6 hours)

NURS 5220	Scholarly Project	6
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#### Concentration Required Credits

Total of 43 credits for FNP
Total of 45 credits for Holistic
Total of 45 credits for Nursing Education

## COURSE DESCRIPTIONS

### Core Required Courses

**NURS 5000. NURSING THEORY (3).** 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 didactic hours each week. No prerequisites.

**NURS 5020. RESEARCH IN NURSING PRACTICE (3).** 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 didactic hours each week. **Prerequisites: NURS 5000.**

**NURS 5040. ROLE OF DEVELOPMENT: THEORY AND PRACTICE (3).** 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 didactic hours each week. No prerequisites.

**NURS 5070. HEALTH POLICY FOR ADVANCED PRACTICE NURSES (3).** This course focuses on analysis of healthcare systems in the United States including public policy making and processes, health care disparities, infrastructure, quality of care and future anticipated challenges. Students will explore public and private health care systems and processes to improve health care. Global health care issues are integrated enhancing understanding of health care issues in the United States. Three didactic hours each week. No prerequisites.

**NURS 5100. FAMILY HEALTH AND NURSING ASSESSMENT ACROSS THE LIFE CYCLE (4).** 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. Three didactic and 2 lab hours per week. **Prerequisites: NURS 5000 and 5040.**

**NURS 5210. PATHOPHYSIOLOGY (3).** This three credit course explores normal and abnormal physiological processes that serve as a foundation for advanced practice nurses. The course undertakes analysis of complex interrelationships and interdependence of organ systems in health and disease. Selected physiologic and pathophysiologic processes are considered at biochemical, cellular, organ, and systems levels. The emphasis is on interrelationships among physiologic processes throughout the body. Three didactic hours each week. No prerequisites.

**NURS 5280. PHARMACOTHERAPEUTICS (3).** 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 a specific diagnosis. The principles of safe use of the prescribed drugs and dissemination of information to the patient are included. Three didactic hours per week. **Prerequisites: NURS 5000 and 5040.**

### Major Concentrations: Family Nurse Practice

**NURS 5120. ADVANCED FAMILY HEALTH NURSING I (4)** This course explores the application of theory and research to the prevention and treatment of common family health and nursing problems. The course includes the principles of health promotion, disease prevention, assessment and management of common health problems in children, adolescents, and adults. The practicum provides the opportunity to gain skill and confidence in identifying and resolving client problems using a variety of treatment modalities and resources. Case management and community referral skills are developed. The philosophical and ethical basis of nursing practice, which promotes excellence in care, is emphasized. Four (4) didactic hours per week and 300 clinical hours over the semester.

**Prerequisites: NURS 5000, 5040, 5100, 5210, and 5280.**

**NURS 5140. ADVANCED FAMILY HEALTH NURSING II (5)** This course further implements the role of the advanced practice nurse in providing and managing care for families with common health 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. Five didactic hours per week and 300 clinical hours over the semester. **Prerequisites: NURS 5000, 5040, 5100, 5210, 5280, and 5120.**

### Holistic Nursing

**NURS 5080. HOLISTIC NURSING PERSPECTIVE (3).** 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. Self-care for the care provider is also covered. Three didactic seminar hours per week. **Prerequisites: NURS 5000 and 5040.**

**NURS 5170. HOLISTIC NURSING INTERVENTIONS (3).** 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 and alternative/integrative therapies are explored. Three didactic hours per week and 112 clinical hours over the semester. **Prerequisites: NURS 5000, 5020, 5040, 5080, 5100, 5280, and 5210.**

**NURS 5180. ADVANCE HOLISTIC NURSING PRACTICUM II (4).** 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. 110 clinical hours. Three seminar hours per week. **Prerequisites: NURS 5000, 5020, 5040, 5080, 5100, and 5280.**

**NURS 5190. ADVANCE HOLISTIC NURSING PRACTICUM II (4).** This four credit course provides students further opportunity to demonstrate integration of holistic nursing concepts in practice design and theory-based practice and to demonstrate leadership in addressing issues important to holistic nursing. Three didactic class hours per week and 112 clinical hours over the semester. **Prerequisites: NURS 5000, 5020, 5040, 5080, 5100, 5280, 5170, and 5180.**

## Nursing Education

**NURS 5230. ORGANIZATIONAL OPERATIONS: THE FACULTY ROLE (3).** This three credit course provides the learner with an overview of the teaching role. Responsibilities related to student advisement, university operation, and the daily activities of the educator are included. The learner's experience will be broadened in viewing faculty life, including the recurring duties required of the novice educator. Three didactic hours per week. **No prerequisites.**

**NURS 5250. THE EDUCATION PROCESS (4).** This four credit course explores the detailed process of teaching and learning. Elements significant in developing teaching materials and identification of learning needs and methods of motivating students to excel are taught. Further information is given related to testing and measurement. The course assists the new faculty member to prepare test items that are related to instructional content and objectives and to measure the student's knowledge retention. Evaluation of the completed test for quality of construction will be stressed. Four didactic hours per week. **No prerequisites.**

**NURS 5270. CURRICULUM DEVELOPMENT AND IMPLEMENTATION (5).** This five credit course is designed to provide the graduate student with opportunities for application of previous content. Instructional design principles are applied to clinical, laboratory, and classroom teaching. Curriculum development provides the learner with experience in placement of courses, leveling course objectives, and linking the philosophy and mission statements of the parent institution with courses for the entire program. A practicum experience is designed to give a reality context for applying the concepts of the teaching role. Students synthesize a conceptual foundation for developing effective learning activities using a case study approach to provide realistic problem solving opportunities. Traditional and innovative learning environments are analyzed in relationship to the advanced role of the nurse. Issues and research findings pertinent to teaching are addressed. Five didactic hours per week and 126 student teaching practicum hours over the semester. **Prerequisites: 5230 and 5250.**

**NURS 5320. ADULT HEALTH NURSING I (4).** This four credit course focuses on promoting and maintaining the wellness of adults through theory and research-based interventions and management. Families are considered when assessing adults and their health status. Management of commonly encountered health deviations in the chronically ill adult population, protocols for treatment decisions, referrals and application of advanced nursing practice skills are covered in the course. Management of primary, secondary, and tertiary health care needs of adults is emphasized. Synthesis and evaluation of various educational theoretical concepts, research findings, and clinical protocols are taught. Four hours of independent study per week. **Prerequisites: 5230, and 5250.**

**NURS 5340. ADULT HEALTH NURSING II (4).** This four credit course involves the practice base theory for advanced nursing with acutely ill clients. Acute care nursing requires a thorough understanding of the relatedness of the body systems, including the reciprocal relationship between the physiologic, psychological, social and spiritual dimensions of the person, as well as an understanding of the dynamic nature of the life process. With advances in biomedical technology, diagnostic procedures, and clinical therapeutics, patients are treated in complex clinical settings. The course prepares competent nurses by requiring a broad knowledge base, decision-making skills, and a commitment to nursing's ethical and professional values. Four hours of independent study per week. **Prerequisites: 5320, 5230, and 5250.**

**NURS 5290. PSYCHIATRIC NURSING I (4).** The purpose of this four credit course is to prepare the graduate student to assess, diagnose, and manage the mental health care needs of culturally diverse populations across the lifespan. The focus is on individuals and families. Emphasis is placed on wellness and the pathophysiology and epidemiology underlying acute and chronic psychiatric/mental health problems. Four hours of independent study per week. **Prerequisites: 5230 and 5250.**

**NURS 5300. PSYCHIATRIC NURSING II (4).** This four credit course continues the content begun in the first psychiatric nursing course. The purpose of this course is to provide the graduate nursing student an in depth study of psychiatric/mental health nursing care management of adults and their families within the framework of advanced practice nursing. The focus is on selected acute and chronic complex psychiatric/mental health care problems of a culturally diverse population. Four hours of independent study per week. **Prerequisites: 5230, 5250, and 5290.**

**NURS 5360. WOMEN'S HEALTH NURSING (4).** This four credit course addresses health promotion for women and the diagnosis and management of common gynecologic, and pre-natal problems. Content includes the application of selected theories and principles from the physical and behavioral sciences central to primary care of women. Women's health issues, such as reproduction, contraception, sexuality and fertility will be included. Four hours of independent study per week. **Prerequisites: 5230 and 5250.**

**NURS 5380. PEDIATRIC HEALTH NURSING (4).** This four credit course addresses diagnosis and management of common acute and chronic health problems of children. The focus is on health promotion and health maintenance of children, newborns through adolescence, within the context of families, schools and communities. Students will utilize research and theories from nursing and related disciplines in order to plan and evaluate care for the child. Four hours of independent study per week. **Prerequisites: 5230, 5250, and 5360.**

### Other

**NURS 5220 I and II. Project Writing (6).** These courses provide the student with the opportunity to develop a state of the science paper related to the area of concentration, under the supervision of a faculty member. Students are required to complete 3 independent study hours per week per semester 1 and 2 (total 6). **Prerequisites: NURS 5000, 5020, 5040, 5070, 5100, 5210 and 5280.**

### Electives

**Nursing Special Topics (NURS 5240/5260) 3 credits each course.**

**NURS 5240 or 5260. SELECTED TOPICS (3).** These three hour courses provide the student with the opportunity to pursue focused studies in areas not covered in the regular course offerings. Three hours of independent study per week. **Prerequisites: NURS 5000, 5020, 5040, 5100, 5210, and 5280.**

### Graduate Faculty

Carol Bompart, Associate Professor, FNP-BC  
B.S.N., 1984, Tennessee State University; M.S.N., 1996, Tennessee State University; Ed.D., Tennessee State University

Kwaghdoo Bossuah, Associate Professor, FNP-BC  
B.S.N., 1997, Grand Valley State University; M.S.N., 2008, Grand Valley State University; D.N.P., 2012, Oakland State University

Diane Campbell, Associate Professor, FNP-BC  
B.S.N., 1998, University of Alabama; M.S.N., 2000, Tennessee State University; D.N.P., 2007, University of Tennessee Health Science Center

Linda Gibson, Associate Professor  
B.S.N., 1987, Harding University; M.S.N., 1994, University of Central Arkansas; D.N.P., 2010, Rocky Mountain University of Health Professions

Kathy Gretton, Assistant Professor, FNP-BC  
B.S.N., 1999, Miami University; M.S.N., Barry University

Courtney Hines, Associate Professor  
B.S.N., 2008, Fisk University; M.S.N., 2008, Vanderbilt University; D.N.P., 2012, University of Minnesota

Donna Kenerson, Associate Professor

B.S.N., 1980, Saint Xavier College; M.P.H., 2001, Tennessee State University; Ph.D., 2010, Vanderbilt University  
 Susan R. Levy, Assistant Professor  
 B.S.N., 1973, Vanderbilt University; M.S.N., 1977, Vanderbilt University; Ed.D., 2007, Tennessee State University  
 Jacqueline Lewis, Assistant Professor  
 B.S.N., 1979, Coppin State College; M.S.N., 1983, Howard University; Ph.D., 2011, University of Northern Colorado  
 Kathy Martin, CNE, Executive Director Division of Nursing  
 B.S.N., 1976, University of Central Arkansas; M.S.N., 1978, University of Alabama; Ph.D., 1995, Vanderbilt University  
 Pinky Noble-Britton, Assistant Professor  
 B.S.N., 2003, Tennessee State University; M.S.N., 2006, Tennessee State University; Ph.D., 2014, Capella University  
 Maria Revell, Associate Professor  
 B.S.N., 1973, Tuskegee University; M.S.N., 1985, University of Alabama-Huntsville; Ph.D., 1992, University of Alabama  
 Debra Rose Wilson, Associate Professor  
 B.S.N., 1991, Lakeland University; M.S.N., 2002, Tennessee State University; Ph.D., 2006, Walden University  
 Edward A. Wiltcher, Assistant Professor  
 M.S.N., 2012, University of Phoenix; Ed.D., 2001, University of Sarasota  
 Marci Zsamboky, Assistant Professor  
 B.S.N., 1985, Indiana University of PA; M.S.N., 1994, University of Pittsburgh; PhD(c) Liberty University.

## DEPARTMENT OF OCCUPATIONAL THERAPY

**Larry R. Snyder, PhD, OTR/L, Department  
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### MAJOR: OCCUPATIONAL THERAPY (OCCT) DEGREE: MASTER OF OCCUPATIONAL THERAPY (MOT)

The practice of occupational therapy means the therapeutic use of everyday life activities (occupations) with individuals or groups for the purpose of participation in roles and situations in home, school, workplace, community, and other settings. Occupational therapy services:

- Are provided for the purpose of promoting health and wellness
- Are provided to those who have or are at risk for developing an illness, injury, disease, disorder, condition, impairment, disability, activity limitation, or participation restriction.
- Addresses the physical, cognitive, psychosocial, sensory, and other aspects of performance in a variety of contexts to support engagement in everyday life activities that affect health, well-being, and quality of life.  
[www.aota.org/Practitioners/Advocacy/State/Resources/PracticeAct/36437.aspx](http://www.aota.org/Practitioners/Advocacy/State/Resources/PracticeAct/36437.aspx)

#### About Occupational Therapy Practitioners

Occupational Therapy practitioners are skilled healthcare providers whose education consists of didactic coursework related to human growth and development with specific emphasis on the social, emotional, and physiological effects of illness and injury. Interactive

lab experiences in the classroom followed by fieldwork experiences in clinical environments reinforce the didactic coursework.

Currently, the occupational therapy practitioner enters the field with a master or doctoral degree. According to the AOTA website, OT practitioners work in a variety of areas including: productive aging, rehabilitation and disability, children and youth, work and industry, and health and wellness.

Dr. Penelope Moyers Cleveland, past President of the AOTA, recently stated that:

“A career in occupational therapy as a therapist or assistant means making a difference and improving the lives of people of all ages—from newborns to the elderly. This is accomplished through designing strategies for everyday living and customizing environments to develop and maximize potential.”  
[www.aota.org/Archive/PrArchive/2008Releases/BestCareers2009.aspx](http://www.aota.org/Archive/PrArchive/2008Releases/BestCareers2009.aspx)

Recent information published by the U.S. Department of Labor's Bureau of Labor Statistics reveals that the job outlook for occupational therapists is expected to grow faster than average, or over 23% from 2006-2016, with the greatest growth in areas working with the elderly ([www.BLS.gov](http://www.BLS.gov)). For more information about a career in Occupational Therapy, please refer to the AOTA's website, [www.aota.org](http://www.aota.org).

Upon completion of all requirements students will be eligible to sit for the national certification examination offered by the National Board for Certification in Occupational Therapy (NBCOT). After successful completion of this examination, the individual will be an Occupational Therapist, Registered (OTR) and will meet the educational requirements for States licensure in the United States.

#### MOT ADMISSION REQUIREMENTS

Program admission is made through the Graduate School of Tennessee State University. Meeting the minimum admission requirements does not guarantee admission due to the competitive nature of the MOT program. In addition to the general requirements of the Graduate School, documentation of the following is required:

- A. Completion of an undergraduate degree with a minimum GPA of 3.0 on a 4.0 scale
- B. Completion of the following prerequisite courses within the last 10 years with a minimum grade of “C”
  1. General psychology
  2. Abnormal psychology
  3. Developmental psychology (covering the lifespan)
  4. Anatomy and Physiology I with lab (4 credits)
  5. Anatomy and Physiology II with lab (4 credits)
  6. Statistics
  7. Medical Terminology
  8. Physics with a lab (4 credits)
  9. Introduction to Sociology or Anthropology
- C. Completion of the GRE within the last 5 years:
  1. 292 or above for verbal and quantitative reasoning combined
  2. 3.5 or above for analytical writing
- D. Completion of a minimum of 30 hours of observation, volunteer, or work experience with an occupational therapist (OTR) in at least two different units or programs. **Observing a**

**Certified Occupational Therapy Assistant is not acceptable in meeting this requirement.**

- E. Submission of a minimum of 3 professional references and/or letters of recommendation

Please note:

A felony conviction may affect a graduate's ability to sit for the NBCOT Certification Examination and/or to attain state licensure.

**MOT Retention Policy**

Students must maintain a minimum cumulative GPA of "B" or 3.0 on a 4.0 system in order to graduate. Any course attempts resulting in a grade of less than "C" will be allowed to be repeated once and the second grade will replace the first. A student may repeat a maximum of two (2) courses in a given program for the purposes of improving grades. The MOT program is designed as a lock step program. Therefore, any student who receives a grade of less than "C" in any course will be required to retake that course when it is offered during the next academic year. Other courses in the curriculum cannot be taken out of sequence.

Any student who does not achieve a 3.0 overall GPA for one semester will be placed on academic probation and the student is given the opportunity to raise his or her GPA to a 3.0 the following semester. If the student does not achieve the 3.0 GPA in the identified semester, he or she will be dismissed from the MOT program. Students may file an appeal for readmission, but students are only allowed one appeal for readmission. The appeal needs to follow the established process noted in the Graduate Catalog.

A comprehensive examination, which consists of written and practical components, must be passed with a score of 75% or better before the student can be enrolled in OCCT 6904 or OCCT 6914. The exam may be attempted twice. If a student is not successful in achieving a minimum score of 75% on the second attempt, he or she will be dismissed from the MOT program. Any need to repeat the exam will require retaking both parts because the comprehensive exam is considered one exam with two parts.

**PROGRAM OF STUDY**

Core Courses: Professional Curriculum Seventy **two (72)** Hours

**Year 1**

OCCT 5110	Anatomy	4
OCCT 5000	Fieldwork Seminar	1
OCCT 5010	Foundations	1
OCCT 5050	Occupational Analysis	3
OCCT 5160	Psychosocial Dysfunction	3
OCCT 5170	Psych. Dysfunction Applied	2
OCCT 5180	Biomechanics	3
OCCT 5120	Neurobiology	3
OCCT 5250	Pediatrics Lecture	3
OCCT 5251	Peds Lab.	2
OCCT 5254	Peds Practicum	1
OCCT 5560	Physical Dysfunction I	3
OCCT 5561	Physical Dysfunction I Lab.	2
OCCT 5564	Physical Dysfunction Practicum	1
OCCT 5760	Administration & Leadership for OT	3
OCCT 5900	Analysis of Research	3

**Year II**

OCCT 5660	Research I	3
OCCT 6560	Physical Dysfunction II	3
OCCT 6561	Physical Dysfunction II Lab	2
OCCT 6554	Physical Dysfunction II Practicum	1
OCCT 5450	School-Based Occupational Therapy	3
OCCT 5860	Research II	3
OCCT 5421	Clinical Practice	2
OCCT 6810	Modalities	3
OCCT 5400	General Diagnoses Applied	3
OCCT 6904	Fieldwork Experience I	6

**Year III**

OCCT 6914	Fieldwork Experience II	6
Electives		
OCCT 6820	Sensory Integration	1
OCCT 6830	Assistive Technology	1
OCCT 6840	Independent Study	1

**COURSE DESCRIPTIONS**

**OCCT 5000 Fieldwork Seminar (1).** This course will provide students with an overall understanding of the fieldwork process including the purpose of fieldwork, fieldwork policy as defined by the Department of Occupational Therapy, fieldwork selection process, professional behaviors and other expectations of students prior to and during fieldwork, conflict resolution and other student concerns pertinent to fieldwork. **Prerequisite:** Admission in the MOT program

**OCCT 5010 Foundations of Occupational Therapy (1).** This course introduces students to the profession of occupational therapy. Topics to be covered include: historical development of the profession, educational and credentialing process, functions of national, state, and local professional associations and human service organizations, professional role delineations within occupational therapy, teaming, promotion of the profession to the public, importance of theory development and documentation to the profession, and an introduction to the variety of service models. **Prerequisite:** Admission in the MOT program.

**OCCT 5050 Occupational Analysis (3).** This hands-on course offers students an opportunity to use critical and creative thinking with difficult occupational related problems. Students will apply occupational therapy practice models in order to analyze and modify the demands of various occupations, activity, and purposeful activities and acquire basic skills in the therapeutic use of self. **Prerequisite:** Admission in the MOT program.

**OCCT 5110 Anatomy (4).** This course is designed to provide students with a comprehensive review of human anatomy. The course will emphasize major muscles, skin, bones and joints, internal organs, blood vessels, and major nerves. **Prerequisites:** Admission into MOT program, Anatomy and Physiology I and Anatomy and Physiology II.

**OCCT 5120 Neurobiology (3).** This course will provide students with an opportunity to study the systems and function of the human nervous system, including concepts related to occupational performance. This will include the sensory system, motor control systems, cognitive system, and the affective system. **Prerequisites:** OCCT 5000, OCCT 5010, OCCT 5050, OCCT 5110, OCCT 5160, and OCCT 5170.

**OCCT 5160 Psychosocial Dysfunction (3).** This course will provide students with an overall understanding of mental health issues and psychiatric diagnoses experienced by children, adults, and older adults along with an in-depth knowledge of the theoretical perspectives used in the Profession of Occupational Therapy to address them in a variety of treatment venues. The course content will be divided into three parts based upon a mental health continuum. The three parts of the continuum are as follow: chronic serious mental illness, wounded well (environmental stressors and related mental health issues), and mental health issues related to physical illness and disability. **Prerequisites:** Admission to the MOT program. **Co-requisite:** OCCT 5170.

**OCCT 5170 Psychosocial Dysfunction Applied (2).** This course will encompass the study of psychosocial factors affecting one's overall health throughout the lifespan and an individual's ability to function within the community and society. This course will provide students with an overall understanding of the assessment and treatment process of individuals whose quality of life has been impacted by mental health issues and/or psychiatric diagnoses. Students will participate in comprehensive learning experiences that provide in-depth knowledge regarding evidence-based assessment and intervention processes pertinent to the profession of Occupational Therapy and related disciplines. **Prerequisites:** Admission to the MOT program. **Co-requisite:** OCCT 5160.

**OCCT 5180 Biomechanics (3).** This course is designed to build on prior knowledge of human anatomy and will focus on human motion, forces that effect motion, and the principles underlying assessment of joint motion, muscle strength, muscle tone, motor control, and coordination. Students will learn and apply the principles of biomechanics and kinesiology to human motion needed for all functional daily activities within the context of occupational performance. **Prerequisites:** One semester of college physics with a lab, OCCT 5000, OCCT 5010, OCCT 5050, OCCT 5110, OCCT 5160, and OCCT 5170.

**OCCT 5250 Pediatric Lecture (3).** This course will provide instruction in pediatric occupational therapy concepts including developmental theory models, typical and atypical development, culture, occupational roles and dynamics between the child and family and the community as related to the Person-Environment-Occupation Model. A variety of service delivery settings will be addressed. **Prerequisite:** OCCT 5000, OCCT 5010, OCCT 5050, OCCT 5110, OCCT 5160 and OCCT 5170. **Co-requisite:** OCCT 5251, OCCT 5254.

**OCCT 5251 Pediatric Lab (2).** This course provides the opportunity to develop professional reasoning and a variety of practical skills including application of the Person-Environment-Occupation Model to the therapeutic use of self, specific assessment and intervention techniques and application of assistive technology for the pediatric population. Students explore methods of data collection and documentation related to occupational behavior with the Person-Environment Occupation Model. Students are also exposed to methods of inquiry that promote the development of evidence based, client and family centered intervention strategies for the pediatric and adolescent populations. **Prerequisites:** OCCT 5000, OCCT 5010, OCCT 5050, OCCT 5110, OCCT 5160 and OCCT 5170. **Co-requisites:** OCCT 5250 & OCCT 5254.

**OCCT 5254 Pediatric Practicum (1).** This course presents students with an opportunity to explore pediatric service delivery settings. Students are guided through analyzing the relationships between person, environment, and occupation through various models of occupational therapy. Students practice effective oral and nonverbal communication skills, and the process of naturalistic inquiry. **Prerequisites:** OCCT 5000, OCCT 5010, OCCT 5050, OCCT 5110, OCCT 5160, and OCCT 5170. **Co-requisites:** OCCT 5250 and OCCT 5251.

**OCCT 5400 General Diagnoses (3).** There are many medical diagnoses that Occupational Therapists must understand in order for the patient or client to be provided with the most efficient and effective therapy interventions. This class will explore common medical, orthopedic and neurological diagnoses that an OT practitioner may encounter daily. The pathophysiology, epidemiology, medical management, alternative treatment (CAM) and the general problems that occupational therapists address will be identified and discussed. **Prerequisites:** OCCT 5180, OCCT 5120, OCCT 5250, OCCT 5251, and OCCT 5254.

**OCCT 5421 Clinical Practice (2).** This course focuses on synthesizing and integrating the knowledge of the musculoskeletal systems and biomechanical concepts discussed in previous classes through problem-based learning. Students will review anatomy, biomechanical concepts, pertinent medical diagnoses, palpation skills, evaluations and interventions for clients with varying medical, orthopedic and neurological diagnoses. Emphasis will be placed on facilitating the student to have confidence and competence with addressing more complex clinical cases. **Prerequisites:** OCCT 5660, OCCT 6560, OCCT 6561, OCCT 6554, and OCCT 5450.

**OCCT 5450 School-Based Occupational Therapy (3).** This course is designed to prepare students to work in the school setting with children and adolescents with disabilities. Students learn about occupational therapy in the school environment and how to design educationally appropriate occupational therapy services. Students are exposed to the role of the COTA, the roles of other team members, IEP dynamics related to teaming, and student advocacy. IDEA and Section 504 funding issues are also covered. **Prerequisites:** OCCT 5900, OCCT 5760, OCCT 5560, OCCT 5561, and OCCT 5564.

**OCCT 5560 Physical Dysfunction I (3).** This course is designed to provide students with in-depth instruction on occupational therapy assessment and intervention planning for orthopedic and other medical conditions that occur in adulthood and late adulthood. Occupational therapy intervention models and frames of reference used with these populations will also be explored. As students gain an appreciation for client-centered and occupation-based practice, they will learn how to facilitate health, prevent injury, and promote recovery and adaptation to disease and disability. **Prerequisites:** OCCT 5180, OCCT 5250, OCCT 5251, OCCT 5254, **Co-requisites:** OCCT 5561 and OCCT 5564

**OCCT 5561 Physical Dysfunction I Lab (2).** This lab course is to be taken concurrently with Physical Dysfunction I. This course provides instruction for and practice of skills required for occupational therapy interventions for orthopedic and other medical conditions that commonly occur in adulthood and late adulthood. Students will learn professional reasoning skills, how to administer and interpret client evaluations, and how to develop evidence-based, client-centered intervention strategies that achieve functional outcomes. Exposure to methods of inquiry that precedes patient evaluation is included. **Prerequisites:** OCCT 5180, OCCT 5250, OCCT 5251, OCCT 5254, **Co-requisites:** OCCT 5560 and OCCT 5564

**OCCT 5564 Physical Dysfunction I Practicum (1).** This course is to be taken concurrently with Physical Dysfunction I and Physical Dysfunction I Lab. In this course, students will participate in a community-based or medical fieldwork experience where they will have opportunities to observe and interact with clients who are in adulthood or late adulthood and have orthopedic and medical diagnoses. Students will develop documentation skills needed for appropriate communication of clinical observations and will apply the information learned in the classroom to the clients observed in the clinical environment. **Prerequisites:** OCCT 5180, OCCT 5250, OCCT 5251 and OCCT 5254. **Co-requisites:** OCCT 5560 and OCCT 5561

**OCCT 5660 Research I (3).** This course is the first of two applied research courses in the MOT curriculum. Students will learn to apply research concepts introduced in the Evidence-Based Practice course and will focus on the concepts related to the introduction, literature review and methodology sections of a research project. Students will explore a clinical problem, learn to develop a research question and formulate a hypothesis. Scientific writing skills and APA format will be fostered, research ethics will be discussed, Human Subjects Training will be completed, and the students will be guided through a typical IRB process. Hands on experience with research design, statistics, and data collection will provide the students with an opportunity to synthesize the didactic material. **Prerequisites:** OCCT 5900, OCCT 5400, OCCT 5560, OCCT 5561, and OCCT 5564.

**OCCT 5760 Administration & Leadership in Occupational Therapy (3).** This course will provide students with an overview of the healthcare industry and acquaint OT students with the business and leadership component of occupational therapy. Students will be introduced to issues that pertain to administering a department or facility. In addition, students will learn leadership concepts and theories from both the formal and informal perspectives. Students will also learn about the leadership opportunities in occupational therapy at the national, state, and local levels. **Prerequisites:** OCCT 5760, OCCT 6560, OCCT 6561, OCCT 6554, and OCCT 5450.

**OCCT 5860 Research II (3).** This course is the second of two applied research courses in the MOT curriculum. Building on the content of Research I, this course will focus on topics related to how data is processed and presented. Focus of didactic material will be on concepts related to the results and discussion sections of a research project. Students will be given the opportunity to run statistical analyses on data sets and create tables, graphs and figures to represent the results. Hands on experiences will also be provided for creating a professional research poster, giving an oral presentation on research related material, and applying the results of a research project to a greater body of knowledge. APA formatting and scientific writing skills will be fostered during this class. **Prerequisites:** OCCT 5660, OCCT 5760, OCCT 5900, OCCT 6560, OCCT 6561, OCCT 6554, and OCCT 5450

**OCCT 5900 Analysis of Research (2).**

This course provides students with an overview of evidence-based practice including research theory, research design, qualitative and quantitative methodology, international influences and critical analysis of contemporary journal articles. Students will also explore the relationships between theory, research, practice, and professional development. **Prerequisites:** OCCT 5180, OCCT 5120, OCCT 5250, OCCT 5251, and OCCT 5254.

**OCCT 6560 Physical Dysfunction II (3).** This course is designed to provide students with an in depth instruction on occupational therapy assessment and intervention planning for neurological and other complex medical conditions that occur in adulthood and late adulthood. Occupational therapy intervention models and frames of reference used with these populations will be explored. Students will advance their understanding of the concepts presented in Physical Dysfunction I by applying them to more complex diagnoses and clinical situations. **Prerequisites:** OCCT 5400, OCCT 5560, OCCT 5561, and OCCT 5564. **Co-requisites:** OCCT 6561 and OCCT 6554.

**OCCT 6561 Physical Dysfunction II Lab (2).** This lab course is to be taken concurrently with Physical Dysfunction II. This course provides instruction for and practice of skills required for occupational therapy interventions for neurological and other complex medical conditions that commonly occur in adulthood and late adulthood. Students will learn professional reasoning skills, how to administer and interpret client evaluations, and how to develop evidence-based, client-centered intervention strategies that achieve functional outcomes while incorporating the interactive elements of the person, environment, and occupation. Exposure to methods of inquiry that precedes patient evaluation is included. **Prerequisites:** OCCT 5400, OCCT 5560, OCCT 5561, and OCCT 5564. **Co-requisites:** OCCT 6560 and OCCT 6554.

**OCCT 6554 Physical Dysfunction II Practicum (1).** This course is to be taken concurrently with Physical Dysfunction II and Physical Dysfunction II Lab. In this course, students will participate in a community-based or medical fieldwork experience where they will have opportunities to observe and interact with clients who are in adulthood or late adulthood and have neurological and other complex medical conditions. Students will develop documentation skills needed for appropriate communication of clinical observations and will apply the information learned in the classroom to the clients observed in various practice settings. **Prerequisites:** OCCT 5400, OCCT 5560, OCCT 5561, and OCCT 5564. **Co-requisites:** OCCT 6560 and OCCT 6561.

**OCCT 6810 Modalities in Occupational Therapy (3).** This is an elective course that provides students an opportunity to learn the theory and to practice the application of thermal and electrical modalities used by occupational therapy practitioners. This course meets the requirements established by Tennessee's Health Related Board for certification in the use of modalities in occupational therapy practice. **Prerequisites:** OCCT 5660?, OCCT 6560, OCCT 6561, OCCT 6554, and OCCT 5450.

**OCCT 6820 Sensory Processing and Integration (1).** This course is an elective designed for students interested in working with children or adults with developmental disabilities. Students analyze the relationship between neurological differences, learning, and behavior as well as the interactive elements of the person, environment, and their impact on occupation. They learn specific skills to manage neurological differences and facilitate typical behavior and learning patterns in order to maximize occupational performance. **Prerequisites:** OCCT 5660, OCCT 6560, OCCT 6561, OCCT 6554, and OCCT 5450.

**OCCT 6830 Assistive Technology (1).** This elective course provides an overview of legal and ethical issues as well as funding procedures related to assistive technology. Students apply assistive technology to a variety of areas of occupation. They use client-centered strategies, develop, and manage assistive technology interventions and funding strategies. **Prerequisites:** OCCT 5660, OCCT 6560, OCCT 6561, OCCT 6554, and OCCT 5450.

**OCCT 6840 Independent Study (1).** This course provides an opportunity for students to explore a topic of interest, under the approval and guidance of an occupational therapy faculty member. **Prerequisite:** OCCT 5660, OCCT 6560, OCCT 6561, OCCT 6554, OCCT 5450, approval of the department head, and an approved plan of study by the supervising faculty member.

**OCCT 6904 Internship I/First Level II Fieldwork Experience (6).** This first internship course requires the minimum of 12 weeks, the equivalent of 470 hours, of participation in an assigned and approved practice setting under the supervision of an occupational therapy practitioner, or another health care professional with three years of clinical or professional experience, according to accreditation standards. The setting must be approved by the Academic Fieldwork Coordinator in the Occupational Therapy Graduate Program. Students must successfully complete all required Occupational Therapy courses prior to enrolling in this course. **Prerequisites:** OCCT 5860, OCCT 5421, OCCT 5760, 2 credits of OCCT electives, and successful completion of comprehensive examination.

**OCCT 6914 Internship II/Second Level II Fieldwork Experience (6).** This second internship course requires the minimum of 12 weeks, the equivalent of 470 hours, of participation in an assigned and approved practice setting under the supervision of an occupational therapy practitioner, or another health care professional with three years of clinical or professional experience, according to accreditation standards. The setting must be approved by the Academic Fieldwork Coordinator in the Occupational Therapy Graduate Program. **Prerequisites:** OCCT 6904.

## GRADUATE FACULTY

- Guinevere Bennett, DC, Assistant Professor  
B.S., 2004 North Georgia College & State University, DC 2009, Life University
- Debra Smart, M.A., M.S., OTR/L, Assistant Professor  
B.S., 1990, Indiana University; M.S., 1996, Eastern Kentucky University; M.A., 2005, Trevecca Nazarene University
- Larry R. Snyder, PhD, OTR/L, Associate Professor and Department Chair  
B.S., 1978, M.S., 1984, University of Wisconsin-Madison; PhD, 2005, North Central University
- Cathleen St. Dennis, OTD, OTR/L, Assistant Professor and Academic Fieldwork Coordinator  
B.S., 2000, California State University Dominguez Hills; OTD-Post Professional Doctorate, 2014, Rocky Mountain University of Health Professions
- Rita Troxtel, OTD, OTR/L, Assistant Professor  
B.S., 1980, Arizona State University; B.S., 1999, Medical College of Georgia; M.S., 1993, University of TN at Chattanooga; OTD, Post – Professional Doctorate, 2012, Rocky Mountain University of Health Professions
- Christine Watt, M.S., OTR/L, Assistant Professor  
B.S., 2000, Southern Illinois University; B.S., 2004, Southern Indiana; M.S., 2007

**DEPARTMENT OF PHYSICAL THERAPY**  
**Ronald De Vera Barredo, PT, D.P.T., Ed. D.,**  
**Department Chair**  
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**MAJOR: PHYSICAL THERAPY (PHTH)**  
**DEGREE: DOCTOR OF PHYSICAL THERAPY (D.P.T.)**

Physical therapists are health care professionals who apply knowledge and skills from the basic clinical and behavioral sciences to prevent or correct acute and chronic physical disorders. Physical therapists design and implement treatment programs to assist patients in achieving maximum levels of independence. This is achieved through prevention of or adaptation to disability, restoration of function, relief of pain, and promotion of healing.

Physical therapists work in a variety of settings with other members of the health care team. These settings include hospitals, outpatient clinics, nursing homes, home health agencies, rehabilitation centers, private clinics, and schools.

The physical therapy program at Tennessee State University is accredited by the Commission on Accreditation in Physical Therapy Education (CAPTE).

### **Philosophy**

The DPT program at Tennessee State University recognizes the reciprocal and responsive nature of professional education, where both the learner and the educator collaborate as partners in the learning process. Inherent in the relationship is the primacy of the learner and the facilitative role of the educator as together they embark on a process of professional education.

### **Statement of Principles**

Integral to the educational partnership is the recognition and acknowledgement of the roles, rights, and responsibilities unique to and common between the learner and the educator. The learner is expected to develop and exhibit characteristics of adult learners including, but not limited to, being problem-centered, willing to learn, and being self-directed. The learner is also expected to be a change agent willing to challenge habituated thoughts and practices as physical therapy moves toward the doctoring profession. The educator is expected to uphold high academic standards, respect learner diversity, be role models of professional behavior, and create an environment conducive for effective learning to occur.

### **Mission**

The Mission of Department of Physical Therapy is to graduate competent entry-level physical therapists who demonstrate cultural competence, apply research evidence to practice, uphold the code of ethics, value lifelong learning, and engage in socially responsible community leadership.

### **Goals and Outcomes**

1. Program:
  - a. To maintain accreditation as an educational program preparing physical therapists who embody the mission statement
  - b. To promote diversity in the physical therapy profession by increasing the number of physical therapists from underrepresented populations
  - c. To foster a community of scholar-practitioners between and among the academic faculty, clinical faculty, and students who serve the community
2. Faculty:
  - a. To engage in a continual process of improvements in teaching
  - b. To exercise professional and social responsibility by participating in institutional, professional, and community service
  - c. To engage in scholarly endeavors which contribute to the body of knowledge of the profession
3. Students: At the end of the Physical Therapy program, graduates will be able to:
  - a. pass the National Physical Therapy Examination
  - b. use the principles of evidence-based practice
  - c. communicate and collaborate effectively and confidently in the health care community
  - d. provide therapy to a diverse population with respect for patient differences
  - e. practice in a safe, legal, and ethical manner
  - f. practice autonomously within the scope of practice
  - g. demonstrate competence as a generalist entry-level physical therapist
  - h. make decisions related to patient care using reflective critical thinking
  - i. serve as compassionate practitioners and patient advocates
  - j. display leadership and professionalism
  - k. engage in lifelong learning
  - l. provide community service

### **ADMISSION REQUIREMENTS**

Admission to the DPT program at TSU is a competitive process with admission to the program occurring once annually. A maximum of 36 students are enrolled in each class. A Bachelor's degree is required by the end of the spring semester in the year you expect to start the PT program.

The Department of Physical Therapy participates in the Physical Therapist Centralized Application Service, known as PTCAS. Applicants applying to the entry-level professional physical therapist program will apply online using the PTCAS application. The DPT program is participating in the "early decision" option under PTCAS. To learn more about the PTCAS application process including information about the "early decision" option, please visit the PTCAS web site at [www.ptcas.org](http://www.ptcas.org). Completed applications will be reviewed and early interviews and admissions will be granted to qualifying applicants.

The application submission period begins in July when PTCAS opens the application portal.

The deadline for applications is October 1.

To be considered for admission to the program, applicants must have:

1. A baccalaureate degree.
  - a. Official transcripts are required from all institutions attended. Transcripts are to be submitted to PTCAS, not the University.
  - b. Posting of the baccalaureate degree must appear on your final undergraduate transcript.
2. Completed application to the Graduate School and payment of application fee.
3. A minimal prerequisite GPA of 3.0 is required. We do not consider overall GPA in our admissions decisions.
4. Successful completion (C or better) of the following pre-requisite courses.
  - a. Two (2) Biology courses with corresponding labs
  - b. Two (2) Chemistry courses with corresponding labs
  - c. Two (2) Physics courses with corresponding labs OR One (1) Physics course and a Movement Science course (i.e. Biomechanics, Kinesiology).
  - d. Human Anatomy (or Anatomy and Physiology I and II in lieu of separate Anatomy and Physiology courses)
  - e. Physiology (may be a general physiology or an exercise physiology course)
  - f. Math—at least a level of math required to take Physics I
  - g. Statistics/ Elementary Statistics
  - h. Two (2) Psychology courses OR One (1) Psychology course and One (1) Philosophy/Logic (or equivalent) course
5. The Admissions Committee may consider the substitution of similar/upper level courses for the required pre-requisites.

Note: Prerequisite Course Substitutions: For information regarding substitutions/specific courses that fulfill the above prerequisites, please visit the Tennessee State University homepage on PTCAS.

6. The GRE score must be submitted to PTCAS using the Code = 7759. A minimum score of 150 in the Quantitative section and a minimum score of 150 in the Verbal section of the GRE are required.
7. A minimum of 40 hours of documented observation in at least two different physical therapy clinical settings. Settings may include acute, long-term rehabilitation, out-patient, skilled nursing facility, and/or home health. Your observation hours must be documented in your PTCAS application.
8. Minimum of 2 letters of recommendations—one must be from a physical therapist. Recommendations must be submitted through PTCAS.
9. Interview with the faculty (Invitations for interview are based on applicant prerequisite GPA and GRE scores).
10. Written essay that assures proficiency in the ability to write, demonstrating analytical ability, appropriate grammar, punctuation, and spelling. Essay is completed during the onsite interview—Please do not send an essay with your application.

### The application deadline is October 1.

Students who expect to complete a Bachelor's degree in Spring just before beginning the program may be accepted pending the receipt of official transcripts including the degree earned

Incomplete applications may result in your application being declared incomplete and result in non-admittance to the program.

**International Students:** Applicants with international undergraduate degrees should review the information outlined in the International Student Admission page of the Tennessee State University website and consult the appropriate sections of the Graduate Catalog.

Applicants who have been recommended to the Graduate School for acceptance into the DPT program are required to pay a non-refundable \$250.00 reservation fee to secure their slot in the program. The reservation fee goes toward the cost of tuition once the applicant matriculates into the program.

### Application Procedures

1. Admission to the Physical Therapy program requires all students to submit an Application form along with a payment of a \$35.00 non-refundable application fee to Tennessee State University School of Graduate Studies and Research. It is strongly recommended that the application be submitted electronically and the fee paid on a charge card.
2. The Department of Physical Therapy participates in the Physical Therapist Centralized Application Service, known as PTCAS. Applicants applying to the entry-level professional physical therapist program apply online using the PTCAS application. The DPT program is participating in the “early decision” option under PTCAS. To learn more about the PTCAS application process including information about the “early decision” option, please visit the PTCAS web site at [www.ptcas.org](http://www.ptcas.org).

### Financial Assistance

Upon acceptance into the physical therapy program, students may apply for available stipends or other financial aid.

### CLINICAL PRACTICUM REQUIREMENTS

All students accepted for admission into the graduate program in Physical Therapy must meet the following requirements prior to enrollment in the clinical practicum:

- Proficiency in medical terminology
- Documentation that they are free from communicable disease
- Tuberculosis screening and all required immunizations
- Current Cardiopulmonary Resuscitation (CPR) and Basic First Aid certification
- Health/Accident insurance coverage
- Professional student liability insurance coverage
- Criminal Background Checks: Criminal background checks and or drug screens may be a requirement for training at some affiliated clinical sites. Based on the results of these checks/screens, an affiliated clinical site may determine to not allow your participation in training at their facility. This could result in your inability to successfully complete the requirements of this program. Additionally, a criminal background may preclude licensure or employment.
- The following Essential Functions that give the ability to perform, whether unaided or with reasonable accommodation, the following functions for a clinical practicum:
  - Critical thinking ability sufficient for clinical judgment;
  - Interpersonal abilities sufficient to interact with individuals, families and groups from a variety of social, emotional, cultural, and intellectual backgrounds;

- Gross and fine motor abilities sufficient to provide safe and effective physical therapy care;
- Auditory abilities sufficient to monitor and assess health needs;
- Visual acuity sufficient for observation and assessment necessary in physical therapy care;
- Tactile ability sufficient for physical assessment and treatment;
- Physical ability to assist moving, transferring and ambulating patients who have physical impairment or dysfunction.

If students are unable to perform the aforementioned essential technical functions, they have the right to request reasonable accommodations in accordance with TSU's disability policy as described in the Tennessee State University Student Handbook.

**Retention**

Students are required to have a cumulative GPA of 3.0 or higher to graduate from the program. If a student's cumulative GPA falls below a 3.0 during his or her tenure in the program, the student will be placed on academic probation.

1. In order to remove the probationary status, the student must attain a GPA requirement of 3.0 or higher each subsequent semester until the cumulative GPA reaches 3.0 or better.
2. If a student's GPA falls below a 3.0 while the student is on probation, the student will be dismissed

Students who withdraw from the program will be allowed to reapply for admission to a subsequent class if they wish to continue to pursue physical therapy studies. Readmission is subject to the approval of the Graduate School and the Department of Physical Therapy.

The Code of Ethics by the American Physical Therapy Association has been adopted by the Tennessee Board of Physical Therapy Examiners as the standard to which all physical therapists are subject under Rule 1150-11-14. Students in the physical therapy program are required to abide by the same standard. Students who violate the Code of Ethics and its interpretive document, the Guide to Professional Conduct, will be referred to the Physical Therapy Non-Academic Action Committee for disciplinary sanctions.

**PROGRAM OF STUDY**

**YEAR 1**

Semester 1	Summer	
PHTH 5360 Gross Anatomy		6
PHTH 5380 Introduction to Physical Therapy		1
PHTH 5330 Psychosocial Behavioral Issues		2
		9 credits
Semester 2	Fall	
PHTH 5470 Applied Physiology		3
PHTH 5480 Biomechanics & Movement Science		5
PHTH 5440 Human Development across the life span		2
PHTH 5421 Tests & Measurements		2
PHTH 5450 Patient Care Principles		2
PHTH 5590 Research I		1
		15 credits
Semester 3	Spring	
PHTH 5540 Clinical Medicine I		3
PHTH 5550 Therapeutic Exercise		3
PHTH 5570 Neuroscience/Neuropathology		3

PHTH 5580 Physical Agents	3
PHTH 5590 Research I	1
	15 credits

**YEAR 2**

Semester 4	Summer	
PHTH 6340 Electrotherapeutics		2
PHTH 6350 Clinical Medicine II		3
PHTH 6360 Clinical Education I		3
PHTH 6390 Research II		1
		9 credits

Semester 5	Fall	
PHTH 6420 Principles of Education		2
PHTH 6440 Cardiopulmonary		3
PHTH 6460 Orthopedics I		4
PHTH 6470 Neurological PT I		4
PHTH 6490 Research III		2
		15 credits

Semester 6	Spring	
PHTH 6510 Neurological PT II		2
PHTH 6540 Prosthetics and Orthotics		3
PHTH 6550 Cardiopulmonary II		1
PHTH 6560 Orthopedics II		4
PHTH 6580 Pediatrics		3
PHTH 6590 Research IV		2
		15 credits

**YEAR 3**

Semester 7	Summer	
PHTH 7320 Administration & Management		2
PHTH 7350 Clinical Education II		4
PHTH 7360 Advanced Clinical Topics I		2
PHTH 7370 Ethical Behavior and Moral Reasoning		1
		9 credits

Semester 8	Fall	
PHTH 7410 Clinical Integration Seminar		2
PHTH 7420 Seminar in Geriatrics		1
PHTH 7430 Special Topics in Physical Therapy		1
PHTH 7454 Clinical Education III		6
PHTH 7460 Advanced Clinical Topics II		2
PHTH 7470 Health and Wellness		3
PHTH 7490 Research V		1
		14 credits

Semester 9	Spring	
PHTH 7554 Clinical Education IV		5
PHTH 7564 Clinical Education V		5
PHTH 7570 DPT Clinical Case Conference II		2
PHTH 7580 DPT Professional Issues		1
		13 credits

Total Credits: 114

**COURSE DESCRIPTION**

**PHTH 5360 GROSS ANATOMY (6).** The purpose of this course is to provide the students with an understanding of gross structures of the human body with emphasis on musculoskeletal and neurovascular structures. Each topic of the course will be discussed from three aspects of conceptual overview, regional anatomy and surface anatomy. Content sequence of the course is anatomy of the back, thorax, upper limb, pelvis, lower limb, head and neck. Prerequisites: Student must be officially admitted into the Physical Therapy program and/or have prior consent of the instructor

**PHTH 5380 INTRO TO PHYSICAL THERAPY (1).** This course is designed to introduce the student to the profession of Physical Therapy including the Tennessee State Practice Act, characteristics of professions, history of the physical therapy profession, standards for professional conduct, the APTA's Code of Ethics, and the Guide for Professional Conduct. Students will also be introduced to HIPAA, the Generic Abilities, and the concept of active learning and problem solving. Prerequisites: Student must be officially admitted into the Physical Therapy program and/or have prior consent of the instructor

**PHTH 5330 PSYCHOSOCIAL BEHAVIORAL ISSUES (2).** An introductory and basic course in a series of two psychosocial classes addresses a variety of psychological and social issues. The introduction of and continuing development of cultural awareness/sensitivity as a part of developing cultural competence will be threaded throughout the course. There will be a review of psychological disorders that impact the practice of physical therapy. Students will learn the art of problem solving and critical thinking. Students are required to participate in service learning activities to enhance their ability to become culturally sensitive as they prepare to work in a multicultural and ever changing world. Prerequisites: Student must be officially admitted into the Physical Therapy program and/or have prior consent of the instructor

**PHTH 5470 APPLIED PHYSIOLOGY (3).** This course will provide the students with an in-depth understanding of the human physiological systems at the system, cellular, and molecular levels. A large emphasis is placed on the acute and chronic responses of the physiological systems to change the environment, stress, disease, and aging as well as on the biochemistry of various control systems. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

**PHTH 5490 BIOMECHANICS AND MOVEMENT SCIENCE (5).** This course starts with the basic concepts of biomechanics of the human body. Students will be exposed to lecture and hands on practical experience in the class. Focus of this course will then be on individual regions of the body including the spine (cervical, thoracic, lumbar and sacroiliac joints), the temporomandibular joint, and the extremity joints (shoulder, elbow, wrist, hand, hip knee, ankle and foot). Students will learn the components of gait as well as learn to analyze complex combined movements incorporating the whole body including trunk, upper extremities and lower extremities activities such as running, and throwing. Prerequisites: Students must have passed all of the first semester courses and/or have prior consent of the instructor.

**PHTH 5490 PATHOLOGY (3).** The fundamental issues in health and disease, including some of the basic terminology and concepts used in pathology will be introduced. The focus will be on relating normal physiology of specific organ systems to signs and symptoms “clinical red flags” that indicate disease. The implications pathological conditions pose for the Physical Therapist and conditions frequently found during therapy sessions that need to be referred for further medical evaluation will be discussed. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

**PHTH 5440 HUMAN DEVELOPMENT ACROSS THE LIFESPAN (2).** The study of human growth and development throughout the life span focuses on normal development especially as it relates to functional movement. The course starts with a review of genetics and developmental theories. The life span, starting with prenatal development and ending with aging is addressed in relationship to the psychological-sociocultural domains. The relationship between motor development, motor learning, and motor control is addressed. The development of the body systems are reviewed so that the relationship can be established in relationship to function. The importance of wellness and prevention is discussed as students are left to recognize the importance of maintaining good health and preventing disease. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

**PHTH 5421 TESTS AND MEASUREMENT (2).** This course will introduce the students to the concepts of palpation, limb length and girth measurement, manual muscle testing, and goniometry. The basic concepts of joint mobilization and observational posture and gait analysis will be covered. Prerequisites: Students must have passed all of the 1st semester courses and/or have prior consent of the instructor

**PHTH 5450 PATIENT CARE PRINCIPLES (2).** Students will be introduced to the basic skills involved in patient transfers, bed mobility, patient positioning, body mechanics, and taking and interpreting vital signs. The teaching of how to use assistive devices (tilt table, parallel bars, walkers, canes, crutches) will be covered. One-third of the course time will be laboratory/psychomotor experience. Students will show proficiency in the performance of these basic physical therapy skills. The course also covers documentation using the SOAP format and functional outcome reporting. The use of a medical chart, abbreviations, and medical terminology will be emphasized. Prerequisites: Students must have passed all of the 1st semester course and/or have prior consent of the instructor

**PHTH 5540 CLINICAL MEDICINE I (3).** This course introduces students to principles and methods of medical screening in physical therapy practice and to diagnostic imaging, laboratory testing and other medical diagnostic procedures. A basic format for orthopedic and neuromuscular medical screening and differential diagnosis in physical therapy is presented and the role of the physical therapist as it interfaces with the role of the physician is emphasized. Basic concepts of pharmacology are also covered including classes of drugs, indications, therapeutic effects, side effects and implications for physical therapy practice. Strategies to effectively and appropriately communicate with health care colleagues and patients regarding medical diagnostic information and medical status are introduced. Prerequisites: Must have completed 2nd semester of professional program and/or permission of instructor.

**PHTH 5550 THERAPEUTIC EXERCISES (3).** This course is designed to introduce students to therapeutic techniques as a tool for restoring and improving the musculoskeletal status of a patient. It will provide a foundation of appropriate exercise principles, and techniques used for joints, muscles, and soft tissue conditions. There will be an emphasis on the identification of patient problems through skillful evaluation, and the establishment of a plan to meet these goals. The laboratory component is designed to go along with the didactic coursework. It will introduce students to the hands on experience of using therapeutic exercise as a tool for restoring and improving the musculoskeletal status of a patient. It will provide a foundation of appropriate exercise techniques used for joints, muscles, and soft tissue conditions. Prerequisites: Completion of the 2nd semester of the professional program and/or permission of the instructor.

**PHTH 5570 NEUROSCIENCE/NEUROPATHOLOGY (3).** This course is designed to provide the students with a working knowledge of the development, structure, function, and pathology of the nervous system via lectures, lab, and group discussions. The structure of the central nervous system (CNS), peripheral nervous system (PNS), and autonomic nervous system (ANS) will be studied as each relates to clinical neurology. This course will involve an analysis of the function of different components of the nervous system and how such function is altered or modified by injury, pathology, and aging. The content of the course is reinforced in the neuroscience laboratory component. A section on neuropathology will also be presented. Prerequisites: Completion of 2nd semester of professional program and/or permission of the instructor.

**PHTH 5580 PHYSICAL AGENTS (3).** This course covers the use of physical modalities in the treatment of selected pathologies. The effects of physical principles and biophysical effects of physical therapy modalities will be covered. Indications, contraindications, and precautions for the use of physical therapy modalities will be stressed. Modalities covered include: ultrasound, phonophoresis, diathermy, moist heat, cryotherapy, hyperbaric oxygen, hydrotherapy, massage, ultraviolet, light therapy, paraffin wax, mechanical compression, and pressure garments. In addition, wound care management in relation to tissue repair, wound debridement and dressings, sterile techniques, pressure garments, and universal precautions will be addressed. Laboratory sessions are included with the course and cover the practical guidelines and clinical parameters in the administration of the physical therapy physical agents. Prerequisites: Completion of 2nd semester of professional program and/or permission of the instructor.

**PHTH 5590 RESEARCH I (1).** This course is the first in a series of five that leads to a final research project that fulfills the required writing and presentation of that project to the faculty. This course provides a basic exploration of the fundamentals necessary for scientific inquiry. Topics include: literature review, formation of a research hypothesis, rules of measurement, research methodology, use of human subjects, reliability, validity, sampling methods, threats to internal validity, introduction to general statistical designs. The course also presents the students with the views that physical therapy is in need of scientific—evidence based research. First, the students will be introduced to research fundamentals including not only general research theory but also research in physical therapy, theory in physical therapy research and research ethics. Second, students will learn how to critically read and evaluate the literature. Third, this course will provide students with skills needed to conduct a literature search off- and online databases. Fourth, the students will learn how to develop an answerable research question and how to evaluate research problems.

Finally, the students will learn about plagiarism, how to properly cite references, and understand the importance of protecting one's intellectual property. Prerequisites: Completion of 2nd semester of professional program and/or permission of the instructor.

**PHTH 6340 ELECTROTHERAPEUTICS (2).** This course includes the theory of electrophysiology of the neuromuscular system and testing, interpretation, and the application of electrotherapeutic procedures (including galvanic tetanus ratio test, reaction of generation test, strength-duration curve and chronaxie test, facial nerve excitability test, repetitive stimulation tests, nerve conduction velocity testing, electromyographic evaluation, and biofeedback). The use of electrotherapeutic modalities for the treatment of neuromuscular, orthopedic, and integumentary disorders will be discussed and practiced. Laboratory experience is a major component of this course. The course is divided into four areas. The first area highlights the basics concepts of electricity and how these concepts are applied therapeutically. The second area focuses on the physiological effects of electricity as it applies to motor response, pain modulation, and tissue repair. The third area addresses the specific modalities used in electrotherapy, including: galvanic stimulation [including low and high volt stimulation] and iontophoresis; transcutaneous electrical nerve stimulation, microcurrent electrical nerve stimulation, Russian stimulation and interferential current; and biofeedback. The fourth area highlights basic electrophysiological testing, including: chronaxie, strength duration, reaction of degeneration, nerve conduction velocity, and basic EMG interpretation. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor

**PHTH 6350 CLINICAL MEDICINE II (3).** This course continues where clinical Medicine I left off, covering the principles and methods of clinical screening in physical therapy practice and to diagnostic imaging, laboratory testing and other medical diagnostic procedures. A progressive format for orthopedic, neuromuscular, and cardiovascular medical screening and the utilization of algorithms for the differential diagnosis in physical therapy is presented and the role of the physical therapist as it interfaces with the role of the physician is emphasized. This course will include differential diagnosis for pediatrics, and multicultural implication of various diagnostic conditions.

Continuation of important concepts of pharmacology will be stressed, including classes of drugs, indications, therapeutic effects, side effects, and implications for physical therapy practice. Decision making skills related to physical therapy evaluation and therapeutic intervention will be emphasized throughout the course. The class will continue to cover various strategies to effectively and appropriately communicate with health care colleagues, patients, the medical community, and third party payers regarding medical diagnostic information and medical status. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor

**PHTH 6360 CLINICAL EDUCATION I (3).** This course allows for the first formal exposure to clinical practice settings for 5 weeks in a clinical facility. It gives the student the opportunity to observe physical therapy evaluation and treatment of patients, as well as providing an opportunity to practice clinical skills learned during the first year of the program. The student will be assigned to a clinical facility for a five week period. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor completion of required health records; attainment of malpractice insurance; completion of criminal background check; CPR Certification at the health care provider level; and evidence of health insurance to cover the student through the duration of the clinical education period.

**PHTH 6390 RESEARCH II (1).** This course is the second in a series of five courses designed to help the student to understand how research applies to the profession of physical therapy. The objective of the course is to help the student develop the skills needed to design and implement an Evidence-Based Practice research project. Students will ultimately develop a publishable research manuscript and present it to peers at a university, local, state/regional, or national meeting. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor

**PHTH 6420 PRINCIPLES OF EDUCATION (2).** This course is designed to present educational principles as they apply to the practice of physical therapy in an academic as well as in a clinical setting. Theories of learning and learning styles are discussed. The role of the physical therapist as a teacher will be presented. Strategies to enhance patient and family education are presented. Students develop and evaluate educational presentations that are appropriate for patient care givers, health care professionals, industry or other community group. The necessity of becoming lifelong learners is emphasized. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 6440 CARDIOPULMONARY (3).** This is a combined lecture and laboratory course addressing physical therapy clinical practices applied to the management of individuals with cardiopulmonary system dysfunction. The course reviews the relevant anatomy and physiology of the cardiopulmonary system and presents the clinical pathophysiology of the cardiac and pulmonary systems to comprehensively address the physical therapy management of individuals with compromised cardiopulmonary health status. Specific diagnostic tests and procedures used in cardiopulmonary care are covered as well as the medical, surgical, and rehabilitative management of patients with primary and secondary cardiopulmonary dysfunction. During the conduct of the laboratory course, students develop a systematic approach not only to the classification of pathology, impairments, functional limitations, and disability of individuals with cardiopulmonary problems, but also to the examination, evaluation, diagnosis, prognosis, and intervention of these individuals. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 6460 ORTHOPEDICS I (4).** This course will emphasize physical therapy examination and intervention strategies for the musculoskeletal system and peripheral nervous system of the upper quarter. Included under the examination techniques will be the upper quarter screening exam, peripheral nerve assessment, accessory motion testing, soft tissue assessment and musculoskeletal special tests. Included under treatment techniques will be joint mobilization and manipulation, soft tissue mobilization, application of therapeutic exercise to the different pathologies, and patient education procedures. The anatomical regions covered are the TMJ, the cervical spine, the thoracic spine and ribs, the shoulder, the elbow, and the wrist and the hand. The different musculoskeletal and peripheral nervous system pathologies found within the upper quarter will be studied. Laboratory procedures will be taught throughout the course. Prerequisites: Successful completion of all prior required coursework and/or with instructor's permission.

**PHTH 6470 NEUROLOGICAL PT I (4).** This course is the first of two courses that provides in-depth exploration of the assessment and intervention procedures used with people who have various neurological pathologies across the lifespan, primarily focusing on pathologies during adulthood. The course will examine the theoretical basis for evaluation and treatment of neurologic disorders. The students will apply knowledge of basic anatomy, neuroscience, physiology, and pathology of the human nervous system to the evaluation and treatment planning of the person with neurologic dysfunction. Case based teaching and learning methods will be used to introduce various pathologies and will be used as a basis for discussion and problem solving relative to the evaluation, goal planning, and planning of treatment for the various neurologic pathologies. Textbook reading will be supplemented with research articles to discuss recent advances in diagnosis and treatment. Historical perspectives will be explored with emphasis on current theories of motor learning/control and skill acquisition. Neurologic evaluation and treatment techniques will be taught and practiced, as well as specific assessment techniques for mobility, balance, and gait. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 6490 RESEARCH III (2).** This course is the third in a series of five courses designed to help the student to understand how research applies to the profession of physical therapy. The objective of these courses is to help the student develop the skills needed to design and implement an Evidence Based Practice research project. Students will ultimately develop a publishable research manuscript and present it to peers at a university, local, state/regional, or national meeting. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 6530 PSYCHOSOCIAL BEHAVIORAL ISSUES II (2).** The learning experience revolves around the professional and ethical issues. Personal assessment in preparation to becoming a practicing professional with social responsibilities will be included. Non-traditional approaches in health and healing will be discussed. The relevant threads of culture and diversity will be included throughout the course content. Prerequisites: Successful completion of all prior required course work and/or permission of the instructor.

**PHTH 6540 PROSTHETICS & ORTHOTICS (3).** An introductory course that introduces students to various prosthetic and orthotic devices used by patients with various conditions, which necessitate their use. The course is divided into two broad areas, namely: Prosthetic Assessment and Management, and Orthotics Management and Assessment. Both portions address the physical therapist's role in prosthetic and orthotic management, including prescription, maintenance, and training. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 6560 ORTHOPEDICS II (4).** This course will emphasize physical therapy examination and intervention strategies for the musculoskeletal system and peripheral nervous system of the lower quarter. Included under the examination techniques will be the lower quarter screening exam, peripheral nerve assessment, accessory motion testing, soft tissue assessment and musculoskeletal special tests. Included under treatment techniques will be joint mobilization and manipulation, soft tissue mobilization, application of therapeutic exercise to the different pathologies, and patient education procedures. The anatomical regions covered are the lumbar spine, the hips and pelvis, the knee, the ankle and the foot. The different musculoskeletal and peripheral nervous system pathologies found within the lower quarter will be studied. Laboratory procedures will be taught throughout the course. Prerequisites: Successful completion of all prior required coursework and/or with instructor's permission.

**PHTH 6570 NEUROLOGIC PHYSICAL THERAPY II (4).** The second of two courses that provides in-depth exploration of the examination and intervention procedures used with clients with various neurological pathologies. This course focuses on the neurological problems present from birth or acquired in childhood or late in life. This course is the second of two courses that provides in-depth exploration of the assessment and intervention procedures used with people who have various neurological pathologies across the life-span. The course will examine the theoretical basis for evaluation and treatment of people with neurological disorders. The students will apply knowledge of basic anatomy, neuroscience, physiology, and pathology of the human nervous system to the evaluation and treatment planning of the person with neurological dysfunction. Case based teaching and learning methods will be used to introduce various pathologies and will be used as a basis for discussion and problem solving relative to the evaluation, goal planning, and planning of treatment for the various neurological pathologies. Textbook reading will be supplemented with research articles to discuss recent advances in diagnosis and treatment. Historical perspectives will be explored with emphasis on current theories of motor learning/control and skill acquisition. Neurologic evaluation and treatment techniques will be taught and practiced, as well as specific assessment techniques for mobility, balance, and gait. The pediatric component will address tests and measures utilized by physical therapists when working with infants and children, as well as treatment interventions. Although the focus will be on neurological conditions, the course will also include various diagnostic conditions from other physiological systems. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 6590 RESEARCH IV (2).** This course is the fourth in a series of five courses designed to help the student to understand how research applies to the profession of physical therapy. The objective of these courses is to help the student develop the skills needed to design and implement an Evidence Based Practice research project. Students will ultimately develop a publishable research manuscript and present it to peers at a university, local, state/regional, or national meeting. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 7320 ADMINISTRATION/MANAGEMENT (2).** This course covers management principles as they apply to the practice of physical therapy. Students will analyze the impact of organizational design, leadership styles, as well as legal, social, economic, and ethical issues. Emphasis will be placed on fiscal operation, personnel and risk management, strategic planning, quality assessment, and role of the physical therapists as a consultant. The structure and function of the health care system in the United States is presented, emphasizing the impact of the different systems on physical therapy. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor.

**PHTH 7350 CLINICAL EDUCATION II (4).** This course provides a hands on experience for the student in selected clinical environments. This course will allow the student an opportunity to practice the clinical skills learned during the professional component of the program. The student will be assigned by the ACCE to a clinical facility for seven weeks. The student will be supervised by a licensed physical therapist. The student will be evaluated on their clinical performance using the APTA's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor(s) in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor; completion of required health records; *successful passing of the structured clinical examination*; and attainment of malpractice insurance; completion of criminal background check; and evidence of health insurance to cover the student through the duration of the clinical education period.

**PHTH 7360 ADVANCED CLINICAL TOPICS I (2).** This course will introduce students to the Acute Care and Home Health settings. The course will introduce students to the procedures required for discharge planning in all clinical settings. Students will learn how to perform accurate home assessments. Prerequisites: Successful completion of all prior, required coursework and/or permission of the instructor.

**PHTH 7410 CLINICAL INTEGRATION SEMINAR (2).** Students analyze complex cases using a variety of decision making frameworks and perspectives. Cases selected emphasize co-morbidities, psychosocial factors, and ethical and financial issues that influence physical therapy practice. Cases are chosen that represent a variety of clinical practice settings. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 7450 CLINICAL EDUCATION III (6).** This course provides a hands on experience for the student in selected clinical environments. Students will have an opportunity to practice the clinical skills learned during the professional component. The student will be assigned to a clinical facility for ten weeks. The student will be supervised by a licensed physical therapist. The student's clinical performance will be evaluated by the Clinical Instructor using the American Physical Therapy Association's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor(s) in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisites: Completion of first two years of study in the School of Physical Therapy.

**PHTH 7460 ADVANCED CLINICAL TOPICS II (2).** Students will discuss various specialty content areas relative to the advanced practice of Physical Therapy. Information regarding physical therapy management of a number of disorders and disabilities will be the focus of the course of study. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 7470 HEALTH AND WELLNESS (3).** Theories of wellness and formats for prevention and screening programs are the focus of this course. Work-site wellness and rehabilitation is covered. Lifespan and cultural variables that impact wellness needs and wellness program designs are emphasized. Roles for physical therapists as consultants in fitness and wellness are introduced. Practical experiences in community health education in culturally diverse environments and in work-site assessment and education are components of this course. Students are expected to be able to analyze population needs for wellness and health services and to develop culturally appropriate programs that enhance health, wellness, and safety and improve quality and productivity in life and work. Prior knowledge of educational theory and methods from PHTH 6420 is applied in this course. Prerequisites: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 7490 RESEARCH V (1).** This course is the fifth and final in a series of five courses designed to help the student to understand how research applies to the profession of physical therapy. The objective of these courses is to help the student develop the skills needed to design and implement an Evidence Based Practice research project. Students will ultimately develop a publishable research manuscript and present it to peers at a university, local, state/regional, or national meeting. Prerequisite: Successful completion of all prior, required coursework and/or permission of the instructor.

**PHTH 7554 CLINICAL EDUCATION IV (5).** This course provides a hands on experience for the student in selected clinical environments. Students will have an opportunity to practice the clinical skills learned during the professional component. The student will be assigned to a clinical facility for seven weeks. The student will be supervised by a licensed physical therapist. The student's clinical performance will be evaluated by the Clinical Instructor using the American Physical Therapy Association's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor(s) in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisite: Successful completion of all prior, required coursework and/or permission of the instructor.

**PHTH 75604 CLINICAL EDUCATION V (5).** This course provides a hands on experience for the student in selected clinical environments. Students will have an opportunity to practice the clinical skills learned during the professional component. The student will be assigned to a clinical facility for seven weeks. The student will be supervised by a licensed physical therapist. The student's clinical performance will be evaluated by the Clinical Instructor using the American Physical Therapy Association's Clinical Performance Instrument. The student will be expected to cooperate and collaborate with their Clinical Instructor(s) in fulfilling the requirements of the clinical education experience. The student will evaluate their performance in the clinical setting and compare this evaluation with that of the Clinical Instructor. Prerequisite: Successful completion of all prior, required coursework and/or permission of the instructor.

**PHTH 7570 DPT CLINICAL CASE CONFERENCE. (2).** This is a seminar course that uses a case-based format in exploring decision-making skills in the management of patients referred to physical therapy. The first half of the course utilizes case discussions that center on the patient/client management model in the context of pathologies, impairments, functional limitations and disabilities throughout the lifespan. The second half of the course requires students to integrate didactic knowledge with clinical experience to interpret, evaluate, or solve problems when given questions dealing with realistic clinical situations. Prerequisite: Successful completion of all prior required coursework and/or permission from instructor

**PHTH 7580 DPT PROFESSIONAL ISSUES (1).** This final course in the series of interactive learning experiences, assists the learner with acquiring the advanced skills required to enter the practice arena. These skills will include but are not limited to resume' development, state laws and regulations, related to physical therapy, development of a professional plan and preparation for the licensure examination. Prerequisite: Successful completion of all prior, required coursework

## GRADUATE FACULTY

- Ronald De Vera Barredo, Professor, Department Chair  
B.S., 1990, University of the Philippines; M.A., 1995, Trevecca Nazarene University; Ed.D., 2002, Trevecca Nazarene University; D.P.T., 2005, Rocky Mountain University of Health Professions
- Karen R. Coker, Assistant Professor  
B.S., 1985, Middle Tennessee State University; B.S., 1986, University of Tennessee-Memphis; D.P.T., 2006, University of Tennessee Health Sciences Center
- Derek B. Charles, Assistant Professor  
B.A., 2001, Mississippi State University; 2005, D.P.T., Belmont University
- Deborah A. Edmondson, Professor  
A.A., 1974, Hiwassee College; B.S., 1976, Middle Tennessee State University; B.S., 1977, University of Tennessee, Memphis, Health Science Center; M.S., 1994, University of St. Francis; Ed.D., 2001, Tennessee State University
- Kevin J. Lawrence, Associate Professor  
B. S., 1976, Marquette University; M.S., 1994, Virginia Commonwealth University; D.H.S., 2006, University of Indianapolis
- David A. Lehman, Professor  
B. S., 1987, Florida State University; M.S., 1989, University of Miami; Ph.D., 2002, Florida State University
- Edilberto A. Raynes, Associate Professor  
B.A., 1984 De La Salle University; Doctor of Medicine, 1991 University of the City of Manila; Ph.D., 2013, Walden University
- Geri Ann Sokell, Assistant Professor  
B.S., 1987, Cleveland State University; M.Ed., 1992, Cleveland State University; D.P.T., 2008, Marymount University

**DEPARTMENT OF PUBLIC HEALTH,  
HEALTH ADMINISTRATION AND HEALTH  
SCIENCES**

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**MAJOR: PUBLIC HEALTH  
DEGREE: MASTER OF PUBLIC HEALTH (M.P.H.)  
CONCENTRATIONS:  
Public Health Science  
Cultural Competency**

**PROGRAM GOALS**

The Tennessee State University Master of Public Health within the College of Health Sciences is committed to the education of students and public health professionals in practice, research, and life-long learning. The Master of Public Health Program seeks to train professionals who will work to preserve and promote the health of local, state, national, and international populations through a focus on cultural competency.

**Public Health Science Concentration:**

The Public Health Science Concentration emphasizes traditional core competencies of public health to enable students to become more effective public health practitioners.

**Cultural Competency Concentration:**

The Cultural Competency Concentration emphasizes the core competencies of public health and provides an in-depth examination, understanding, and analysis of diverse populations. Graduates in this concentration are trained to become competent public health practitioners who will develop and implement practices, and policies that respect and respond to the cultural diversity of communities in the United States and beyond.

**Admission Requirements**

Applicants must possess a baccalaureate or graduate degree from an accredited college or university with a cumulative grade point average of 3.00 or higher (on a 4.00 scale) for the undergraduate degree or a graduate cumulative grade point average of 3.5 or higher in the major subject area. Graduate Record Examination (GRE) scores from within the past five years will be required for all applicants. Verbal and quantitative scores will be reviewed. Applicants who hold a doctoral degree may be exempt from the GRE requirement. Other professional school standardized test scores (for example, GMAT, MCAT, DAT, and LSAT) may be substituted for GRE scores. Applicants whose native language is not English will be expected to submit certificates of proficiency in English or a minimum score of 500 (paper test) or 173 (computer-based test), or 61 (Internet-based test) on the Test of English as a Foreign Language (TOEFL).

Three letters of recommendation are required from three individuals (at least one letter from a former instructor, professional reference, or employer) familiar with the applicant's academic background and/or interest in public health. Applicants must also submit a personal statement of approximately 500-1,000 words indicating their interests and career goals, including why the applicant wants to complete an MPH degree. Overall admission into the program is competitive; therefore, students with the strongest credentials will be selected over those who are less competitive.

A minimum of 30 semester hours of coursework must be completed in residency. Students may be allowed to take up to (9) credit hours without being fully admitted into the program. (Successful completion of the nine hours does not guarantee acceptance into the MPH program.)

**PROGRAM OF STUDY**

The MPH program requires completion of 42 semester credit hours. The Program offers two (2) tracks: Public Health Science and Cultural Competency.

Major Field Core: Both tracks, 24 hours

PUBH 5010—Biostatistics	3 credits
PUBH 5020—Environmental Health Science	3
PUBH 5100—Principles of Epidemiology	3
PUBH 5110—Management & Public Health Policy	3
PUBH 5120—Behavioral Science and Public Health	3
PUBH 6000—Public Health Field Placement	3
PUBH 6030—Cultural Competency I	3
PUBH 6100—Capstone Project	3

**Total Credit Hours** 24 Hours

Concentrations(s): Fifteen (15) credit hours are required (9 in the concentration and 6 electives) for both the Public Health Science and Cultural Competency Concentrations.

Concentration I (**Public Health Science**, 15 hours) (other courses with consent of advisor)

PUBH 6070—Bioterrorism & Disaster Preparedness*	3
PUBH 6160—Principles of Health Education*	3
PUBH 6170—Program Development & Evaluation*	3

**Two (2) Program Electives—(chosen from list of recommended electives below) 6**

One (1) Elective from outside of department with advisor's approval 3

**\*Note: Courses with an asterisk are required for this concentration**

18 hrs + 24 hrs

Concentration II (Cultural Competency, 15 hours)	
PUBH 6050—Understanding Health Disparities*	3
PUBH 6220—Race, Ethnicity & Gender in Health Care*	3
PUBH 6300—Cultural Competency II*	3

**Two (2) Program Electives—(chosen from list of recommended electives below) 6**

One (1) Elective from outside of department with advisor's approval 3

\*Note: Courses with an asterisk are required for this concentration

## Recommended Electives for the Public Health Science &

### Cultural Competency Concentrations

PUBH 6020 Health Communication	3
PUBH 6040 Public Health Ethics	3
PUBH 6090 Seminar: Critical Issues in Public Health	3
PUBH 6160 Principles of Public Health Education	3
PUBH 6230 HIV/AIDS and Public Health	3
PUBH 6260 Social Marketing	3
PUBH 6270 Multicultural Perspectives in Health & Health Care	3

One (1) outside elective for each concentration may be selected from, or outside of this recommended list of courses with the advisor's approval (FINA 6300, EDCI 5950, EDSE 5820/6820, MGMT 6300, etc.)

## PROGRAM REQUIREMENTS

1. Students are required to maintain a grade point average of at least a B (3.0) in their program of study in order to maintain good standing in the MPH program.
2. Students must maintain a B or above in all required core courses. This is consistent with the University's policy of a 3.0 GPA for core courses and for the overall GPA in the program.
3. A student may receive a grade of C (2.0) in two courses only. The Program GPA and the overall GPA must be 3.0 at all times. Students will only be allowed to repeat a grade of 'C' in one course; the receipt of three grades of 'C' or any grade below 'C' is not acceptable for graduate credit and will result in automatic dismissal from the program.
4. Academic probation and dismissal will be addressed by the advisor, program director, and dean of the College of Health Sciences.
5. Students must maintain a cumulative grade point average of 3.0 at the end of each semester while a student is enrolled in coursework at Tennessee State University. In accordance with the Graduate School guidelines, any student who does not meet these conditions will be placed on probation by the program.
6. Courses applied to the MPH degree program must be approved by the director and advisor. Only one (1) core course may be transferred into the major and the course must be comparable to the required course. In addition, the core course must be taken within 3 years from an accredited program.
7. Students must complete a Public Health Field Placement Project, rather than a Thesis. This requirement is represented as PUBH 6000 in the MPH program.
8. Students in both concentrations must pass a comprehensive examination prior to graduation.

## Course Descriptions

**PUBH 5010 Biostatistics (3).** This course introduces the basic principles and methods of biostatistics. This course will focus on the interpretation and application of statistics to health care, medicine, public health, and epidemiology rather than derivations of statistical theory. Specific emphasis will be placed on the fundamental concepts and techniques of statistical inference with applications in public health. Concepts to be covered will include descriptive and inferential statistics including hypothesis testing, p-values, and confidence intervals. Additionally, comparisons of means and proportions; the normal distribution; regression and correlation; confounding; concepts of study design, including randomization, sample size, and power considerations; logistic regression and a general overview of some methods in survival analysis will be covered in this course. The computer will be used throughout the course and students will take part in lab sessions where they will be introduced to the use of statistical packages such as SAS and SPSS. Prerequisite: PSYC 2180 or SOCI 3000 or equivalent.

**PUBH 5020 Environmental Health Science (3).** This course will introduce concepts, principles, and applications of the main natural and social science disciplines that form the basis of environmental health and describes how these disciplines and their practitioners interact in the environmental health paradigm. Topics include the sources, pathways of exposure, and methods of control of the physical, chemical, biologic, and sociologic factors that impact human health in ambient, indoor, and occupational environments. Students will gain first-hand experience with the multidisciplinary environmental health approach to resolve current and emerging environmental problems that pose a risk to public health. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 5100 Principles of Epidemiology (3)** - This course introduces principles and methods of epidemiologic investigation of infectious and noninfectious diseases. The course illustrates how methods of studies of the distribution and dynamic behavior of disease in a population can contribute to an understanding of etiologic factors, modes of transmission, and pathogenesis. Different types of study designs are presented, including randomized trials, case-control and cohort studies, and risk estimation and causal inferences. The interface between Principles of Epidemiology and the development of policy is demonstrated. Laboratory problems presented in the class will provide experience in epidemiologic methods and inferences, illustrating a common-vehicle epidemic, the spread of infectious diseases in populations, epidemiological aspects of a noninfectious disease, causality, vaccination, the epidemiological approach to health services evaluation, rates of morbidity and mortality, sensitivity and specificity, and life table methods. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 5110 Management & Public Health Policy (3).** The purpose of this course is to provide graduate students with an orientation to health policy, politics and the health policy process in the United States. Students will develop knowledge of current health policy issues, reform agendas at the federal, state, and local levels, and skills to critically examine their place in the health policy process. The course will discuss key forces involved in the policy process including economic, social, ethical, and political factors; and central players of importance, including special interest groups, lobbyists, the press, elected officials, legislative staff and public agencies. Prerequisite: Admission in the public health program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 5120 Behavioral Science and Public Health (3).** This course primarily focuses on the most contemporary issues in behavioral science and health education. A multi-level, multi-theoretical perspective is taken. The rationale for the growth of behavioral science within public health is reviewed; the effectiveness of health behavior interventions is explored; theoretical perspectives are surveyed; and applications of theory to specific settings and problems are reviewed. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines. Prerequisite: Admission in the public health program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6000 Public Health Field Placement (3)** - The MPH field placement is a graded supervised internship in a traditional or innovative public health setting. The purpose of the field requirement is to encourage exposure to professional public health practice and the application of didactic knowledge and problem solving in the field. The field experience is required for all students regardless of prior work experience for a total of 160 contact hours. Students may complete their field placements in traditional settings such as state or local departments of public health or other settings in which innovative public health activities take place (e.g., AIDS service organizations, non-governmental health organizations, schools, etc.). All placements are subject to the approval of the field coordinator. Additional requirements of this course will be provided by the field coordinator. Prerequisite: Successful completion of all first and second semester MPH coursework (students must complete at least 21 credit hours, including 6 core courses; permission of field coordinator and admission in the public health program).

**PUBH 6020 Health Communication (3).** This course will explore the communication process and practices that can be used to promote positive change in health care communication. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6030 Cultural Competency I (3).** This course focuses largely on the health/healing beliefs and practices of a wide-range of religious and cultural practices and communities found in the United States in a healing context dominated by secular western biomedicine. The course will begin by investigating biomedicine as a form of cultural healing with distinct fundamental principles and values. Students will also examine cultural traditions with a particular understanding of oneself, health and wholeness, illness and suffering, and healing and transformation which are expressed in distinct healing practices. Prerequisite: Admission to the MPH program or permission of an advisor for students using the course as an elective in other graduate disciplines.

**PUBH 6040 Public Health Ethics (3).** This course provides an overview of values and principles in public health ethics comparing and contrasting them with those of biomedical ethics. Students will critically examine selected cases that illustrate a range of public health ethical issues (e.g., ethics in disease screening programs, environmental justice, global public health research, etc.), identify ethical problems, and use selected strategies to arrive at reasoned ethical positions. Prerequisite: Admission to the public health program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6050 Understanding Health Disparities (3).** This course introduces students to the issue of health disparities. It will present the nature of racial and ethnic disparities and the prevalence of disparities in health status. Students will conduct and/or review research literature on race disparities. Also, theories that explain disparities and efforts to address them will be covered. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6070 Public Health and Disaster Preparedness (3).** This course presents current public health issues related to the preparation for a possible bioterrorist event. This class focuses on the practical application of the principles of epidemiology and public health in preparing for a bioterrorist event as well as the role and responsibility of the local, state, and federal government. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6090 Seminar: Critical Issues in Public Health (3).** This course provides a framework for the development of advanced professional practice and leadership in public health. Topics include the scope of public health, leadership competencies, problem solving, and communication methods. Additionally, case studies, lectures, and group presentations are utilized in this course. Focus will be placed on concepts in public health related to determinants of health; cultural, social and political concepts of disease; prevention and health promotion; behavioral and social science; community-based interventions; and health policy. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6100 Capstone Project (3).** The capstone course will serve as a culminating experience to provide students an opportunity to integrate the field experience with classroom knowledge. In this seminar course, students integrate their previous MPH coursework and field experiences as they examine current and emerging public health issues. Students who enroll in the capstone course will develop a written project relevant to the field placement experience and present the information to a faculty committee. Prerequisite: Successful completion of all required MPH coursework and admission in the public health program

**PUBH 6160 Principles of Public Health Education (3).** This course provides an overview of philosophies and theories underpinning the practice of public health education in diverse settings (e.g. schools, communities, hospitals, worksites, etc.) Special emphasis is placed on health behavior theories as they apply to educational interventions. Students will conduct a needs assessment, plan and evaluate a health education intervention. Service learning may be a component of this course. Prerequisite: Admission to the public health program or permission of the advisor for students using the course as an elective in other graduate disciplines.

**PUBH 6170 Program Development and Evaluation (3).** The main goal of this course is to familiarize students with the fundamentals of health, program development, and program evaluation. Although the course emphasizes general evaluation methodology, specific health programs and health policy applications are employed as illustrations. In addition to surveying design and measurement basics, the course explores the role of evaluation research in health program development. Prerequisite: PUBH 5120 or approval of professor and admission in the public health program.

**PUBH 6220 Race, Ethnicity, Gender, and Health Care (3)** - This course will explore how race, ethnicity, and gender affect health and health care, including care services and policies governing these services. It will explore common health issues affecting minorities and women from medical, economic, and sociopolitical perspectives. The course will provide an introduction to women's health concerns and those of some minority groups and the barriers to achieving complete health. Students will be encouraged to give critical thought to the questions of what it means to deliver culturally competent care. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6230 HIV/AIDS and Public Health (3).** This course provides contemporary issues related to HIV/AIDS infection affecting children and adults. Also, significant time is devoted to discussions on stigmatism, policy, and prevention strategies and programs. Additionally, this course will provide an overview on the changing development in AIDS/HIV, and the consequences this has on race, class, and culture. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6260 Social Marketing (3).** This course is designed to provide students with an overview of social marketing and its application to public health education campaigns. The course will cover general principles, as well as key steps in social marketing planning, implementation and evaluation. Topics include ethical issues in marketing, market/audience analysis, formative research techniques, marketing plan development, and aspects of health media communications. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6270 Multicultural Perspectives in Health and Health Care (3).** This course is designed to explore the relationships between culture and health promotion/disease prevention issues around the world. Students will analyze the cultural, educational, social, economic, political, and environmental impact of health and developments in various countries. The course will examine western and non-western health systems and the role of culture and its impact on the health of individuals. Prerequisite: Admission to the program or permission of advisor for students using course as an elective in other disciplines.

**PUBH 6300 Cultural Competency II (3).** This course will provide students with skills to work effectively with culturally diverse populations. In addition to exploring historical and social events that have resulted in prejudice against certain groups, this course will allow students the opportunity to explore their own beliefs and how these beliefs impact their work. Prerequisites: Admission into public health program and/or permission of advisor if used as an elective in other graduate disciplines and PUBH 6030.

### Graduate Faculty

Elizabeth Brown, Associate Professor

B.S., 1991, Tennessee State University; M.S.P.H., 1994, Meharry Medical College; Ph.D., 2008, The University of Tennessee, Knoxville

Wendylyn Inman, Assistant Professor

B.A. 1978 Wittenberg University, Ph.D., 1985, Vanderbilt University

Owen Johnson, Associate Professor

B.S., 1995, Fort Valley State University; M.S., 1998, University of Kentucky; Dr.P.H., 2005, University of Kentucky

Mohamed Kanu, Associate Professor

B.A. (Hons). 1994, Fourah Bay College, University of Sierra Leone; M.A., 1999, University of Memphis; MPH., 2001, Ph.D., 2004, Saint Louis University

Kushal Patel, Associate Professor

B.A. 1993, Temple University, M.A. 1997, American University, Ph.D., 2004, Vanderbilt University

Elizabeth Williams, Assistant Professor

B.S., 1994, University of Illinois-Urbana-Champaign; M.A., 1998, Ph.D., 2002, University of Kentucky

Reylon B. Briggs, Assistant Professor

B.S., 1991, Tennessee State University; M.S., 1993, Jacksonville State University; D.H.A., 2014, The University of Phoenix

Charles Brown, Assistant Professor

B.S., 2001, Tennessee State University; M.Ed., 2002, Belmont University; Ph.D., 2005, Middle Tennessee State University

## DEPARTMENT OF SPEECH PATHOLOGY AND AUDIOLOGY

**Tina T. Smith, Ph.D., CCC-SLP, Chair**

**Avon Williams Campus**

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**(615) 963-7081**

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**MAJOR: SPEECH AND HEARING  
SCIENCE**

**DEGREE: MASTER OF SCIENCE (M.S.)**

The Department of Speech Pathology and Audiology offers a course of study leading to a Master of Science Degree in Speech and Hearing Science. The Master of Science degree can be obtained on-campus in a traditional format or on-line through a distance education format. Certification and licensure to practice as a Speech-Language Pathologist requires a master's degree as entry level. The Speech and Hearing Science major has a curriculum that leads to certification by the American Speech Hearing Language Association (ASHA), and licensure by the State of Tennessee's Department of Health and/or Department of Education.

### DEGREE REQUIREMENTS

The program consists of academic and clinical requirements. The curriculum consists of forty-one (41) semester hours of required courses, six (6) semester hours of **focus** courses (which are required for students desiring an Education Endorsement and/or for students lacking the requisite knowledge and coursework in Speech and Hearing Science), plus a comprehensive examination and/or thesis. The program also requires a minimum of six (6) additional credit hours of clinical practicum during which the student must obtain 400 clock hours of clinical practicum experiences under the supervision of certified clinicians (CCC-SLP or CCC-A) in nine (9) areas of speech-language assessment and intervention across the lifespan. Students entering the program are required to have (1) a degree in Speech Language Pathology or (2) the required prerequisite courses. Students plan their curriculum in consultation with an advisor. For employment in the school system, graduate students may complete requirements for licensure by the State Department of Education. These requirements are in addition to those required for the degree. The curriculum emphasizes both classroom and clinical experiences necessary for a comprehensive understanding of normal communicative processes, including reception, integration, and expression.

It emphasizes in-depth analyses of communicative and swallowing disorders, giving special attention to techniques for diagnosis, remediation, and management. Supervised clinical observation and practicum experiences in speech-language pathology and audiology are an integral part of the curriculum. To meet requirements for graduation, students must obtain the minimum number of required clinical clock hours for ASHA certification.

Twenty-five hours of observation and 50 clinical hours completed at the undergraduate level can be applied toward ASHA certification requirements. All observation and clinical clock hours amassed at the undergraduate level must be obtained under the supervision of an ASHA certified member.

Practicum experiences, applicable toward ASHA certification, are provided on-campus at the TSU Speech and Language Clinic where diagnostic and clinical services are offered to children and adults in the Middle Tennessee area. Students are also assigned to off-campus practicum sites to obtain diverse experience through the Department's affiliations with school systems, child-care centers, habilitation and rehabilitation facilities, hospitals, and health-care facilities.

The Master of Science Program in Speech and Hearing Science is accredited by the Council on Academic Accreditation (CAA) in Speech-Language Pathology of the American-Speech-Language-Hearing Association (ASHA). ASHA implemented new Standards for the Certificate of Clinical Competence in Speech-Language Pathology effective 2014. Students may be required to take additional prerequisite coursework in order to provide evidence of knowledge and skills required for certification.

### Essential Functions

The Department of Speech Pathology and Audiology has created a list of Essential Functions which are task-and attribute-based criteria needed to successfully achieve professional entry-level competencies. The Essential Functions of Speech-Language Pathologists establishes the expectations and requisite abilities considered necessary in the field of speech-language pathology.

Below are the essential functions that individuals must possess either independently or with reasonable accommodations.

1. Critical thinking skills sufficient for clinical judgment;
2. Interpersonal skills sufficient for effective interaction with individuals and families from a variety of cultural backgrounds;
3. Communication skills with proficiency in English and/or other languages of service delivery sufficient for effective written and spoken interaction with others;
4. The ability to comprehend and read professional literature/reports and write university level papers and clinical reports in English;
5. Physical mobility sufficient to move from room to room and maneuver in small spaces;
6. The ability to participate in classroom or clinical activities for 2-4 hour blocks of time with one or two breaks;
7. The ability to move independently to, from and in academic/clinical facilities;
8. Gross and fine motor abilities sufficient for manipulation of evaluation and treatment instruments and materials;
9. The ability to respond quickly enough to provide a safe environment for clients in emergency situations, including fire,

- choking, etc., and in application of universal precautions (standardized approach for infection control);
- 10. Visual acuity, hearing sensitivity and auditory discrimination sufficient for client evaluation and treatment;
- 11. The ability to implement speech, language diagnostic and hearing screening procedures; administer and score instruments, interpret results and make appropriate recommendations and decisions, including the ability to evaluate and generalize appropriately without immediate supervision;
- 12. The ability to select, develop and implement comprehensive intervention strategies for treatment of communication and related disorders;
- 13. The ability to maintain attention and concentration for a sufficient amount of time to complete academic/clinical activities, typically 2-4 hours with 1-2 breaks.
- 14. The ability to maintain appropriate work place behavior, including understanding and respect for supervisory authority, punctuality and regular attendance.

- Graduate Record Examination (GRE) of 146 minimum (verbal) and 140 minimum (quantitative) OR a minimum score on the Miller Analogies Test (MAT) of 380.
- Bachelor’s degree and completion of the required prerequisite courses\* in speech language pathology.

For admission with Conditional Classification, the student may possess a GPA between 2.75 and 3.4 with an acceptable GRE or MAT score. The student with an acceptable GPA and a 138 minimum (verbal ) and 136 minimum (quantitative) on the GRE or a minimum score on the MAT of 370 may also be considered for conditional admission. The student’s classification is changed to unconditional if a 3.00 or better GPA is attained in the first 9 credit hours of graduate coursework. Any exception to these standards must be approved by the Graduate Selection Committee of the Department, Department Head, School Dean and Graduate Dean.

If evaluation of an applicant’s transcript shows prerequisite deficiencies, the student must complete each of the prerequisite courses\* prescribed before unconditional status is achieved. 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).

**Criminal Background Check**

A criminal background check and/or a drug screening are required at most affiliated clinical training sites. Based on the results of these checks an affiliated clinical site may decide to not allow students at their facility. Such a decision could impede a student’s ability to successfully complete the requirements of this program. Additionally, a criminal background may preclude licensure or employment. If criminal background checks or drug screenings are required, students are expected to cooperate fully with the process and pay all associated costs. Tennessee State University and the Speech Pathology and Audiology Department are not liable if the results of a criminal background check or a drug screening indicates that a student is unable to complete the requirements of the program or if such results preclude one from obtaining licensure or employment. [Note: All applicants for initial speech-language pathology licensure in Tennessee must obtain a criminal background check.]

**ADMISSION REQUIREMENTS**

Formal admission to the Department of Speech Pathology and Audiology is made through the Tennessee State University (TSU) School of Graduate Studies and Research. To apply to the tradition (on ground) program, all admission materials should be filed with the Graduate School by February 1st prior to the fall semester in which the student wishes to enroll. Students are admitted to the distance education program every other year. The admission deadline for the distance education format is July 1 of every even year. Acceptance into the Program is highly competitive.

**APPLICANTS ARE REQUIRED TO SUBMIT:**

1. A Graduate School Application and Fee
2. Official College Transcript(s)
3. Results from the Graduate Record Examination (GRE) OR the Millers Analogy Test (MAT)
4. A Letter of Intent
5. Three Letters of Recommendation (addressing school, leadership, volunteer and life experiences)

For admission with Unconditional Classification, the student must have a:

- Grade Point Average (GPA) of 3.5 or higher

**\*PREREQUISITE COURSES**

<b>SPTH 2500</b>	<b>Anatomy and Physiology of the Speech and Hearing Mechanism</b>	<b>3</b>
SPTH 2600	Phonetics	3
<b>SPTH 2800</b>	<b>Introduction to Language, Hearing and Speech Disorders</b>	<b>3</b>
SPTH 3300	Clinical Methods in Articulation Disorders	3
STPH 3500	Language Development in Children	3
SPTH 3514	Observation of Clinical Practicum*	1
		<b>15/16</b>

ON-CAMPUS PROGRAM OF STUDY (Full Time 5 semester)  
 Sequence of Graduate Courses for the Completion of the M.S.  
 Degree in Speech and Hearing Science

FALL I		Credit Hours
SPTH 5570	Anatomy & Physiology of Speech	3
SPTH 6550	Seminar in Language Development	3
SPTH 5520	Studies in Articulation	3
SPTH 5510	Practicum in Speech-Language Pathology	1
SPTH 5710	Practicum in Audiology	1
		<b>11</b>
SPRING I		
SPTH 5530	Neuroanatomy & Neurophysiology	3
SPTH 6560	Studies in Language Disorders	3
SPTH 6540	Studies in Organic Speech Disorders	3
SPTH 5510	Practicum in Speech-Language Pathology	1
		<b>10</b>
SUMMER I		
SPTH 5630	Adult Aphasia	3
SPTH 6530	Seminar in Stuttering	3
SPTH 5510	Practicum in Speech-Language Pathology	1
		<b>9</b>
FALL II		
SPTH 5740	Advanced Audiology	3
SPTH 5580	Voice Disorders	3
SPTH 6400	Neurogenic (Motor Speech) Disorders	3
SPTH 5510	Practicum in Speech-Language Pathology	1
SPRING II		
SPTH 6420	Multicultural & Cultural Diversity	3
SPTH 5750	Aural Rehabilitation	3
SPTH 5510	Practicum in Speech-Language Pathology	1

SPTH 5110 Methods of Research 2

**FOCUS COURSES :**

SPTH 5250 Methods in the Public Schools\* 3  
 SPTH 5800 Speech Science & Instrumentation\*\* 3  
 SPTH 5120 Thesis (Optional)\*\*\* 4

\* Required for students desiring Education Endorsement  
 \*\*Required for students lacking the requisite knowledge and coursework.

\*\*\*Required only for students writing thesis

NOTE: There are part-time, 8 semester and 12 semester tracks also.

**ONLINE PROGRAM OF STUDY**

Sequence of Graduate Courses for the Completion of the Online M.S. Degree in Speech and Hearing Science

SEMESTER		Credit Hours
<b>Spring I*</b>		
SPTH 6550	Language Development	3
SPTH 5570	Anatomy & Physiology	3
		6
<b>Summer I</b>		
SPTH 5520	Studies in Articulation Disorders	3
SPTH 5530	Neuroanatomy & Neurophysiology	3
SPTH 5510	Practicum in Speech- Language Pathology	1
		7
<b>Fall I</b>		
SPTH 6560	Studies in Language Disorders	3
SPTH 6540	Organic Speech Disorders Dysphasia	3
		6
<b>Spring II</b>		
SPTH 5630	Adult Aphasia	3
SPTH 6530	Seminar in Stuttering	3
		6
<b>Summer II</b>		
SPTH 5580	Voice Disorders	3
SPTH 5740	Advanced Audiology	3
SPTH 5510	Practicum in Speech-Language Pathology	1
		7
<b>Fall II</b>		
SPTH 6400	Neurogenic (Motor Speech Disorders)	3
SPTH 5510	Practicum in Speech- Language Pathology	1
SPTH 5710	Practicum in Audiology	1
SPTH 5110	Methods of Research	2
		7
<b>Spring III</b>		
SPTH 5510	Practicum Speech-Language Pathology	1
SPTH 5250	Methods in the Public Schools	3
SPTH 6420	Multicultural & Cultural Diversity	3
		7
<b>Summer III</b>		
SPTH 5800	Speech Science & Instrumentation	3
SPTH 5750	Seminar in Aural Rehabilitation	3
SPTH 5510	Practicum in Speech-Language Pathology	1
		7

**Financial Assistance**

Upon acceptance into the graduate program, students may apply for available graduate assistantships or other financial aid. Students requesting graduate assistantships are required to fill out the graduate assistantship application located on the Graduate School’s website. This form is submitted with the other application materials. Students requiring financial aid must fill out a financial aid form and contact the university’s financial aid office.

**COURSE DESCRIPTION**

**SPTH 5110. METHODS OF RESEARCH. (2)** Course which provides an overview of the nature of research designs. The course introduces students to the classification of research. It helps students design and conduct an original piece of research, introducing acceptable writing styles and statistical data.

**SPTH 5120. THESIS WRITING. (4)** A course designed to provide the student with an opportunity to germinate, develop, and study a special area of interest. The student is guided by the principles of the scientific method, and collects and interprets data in accordance with these principles.

**SPTH 5250. METHODS OF SPEECH AND HEARING SERVICES IN THE SCHOOL SETTING. (3)** Prepares the student for effective performance in the school setting in providing treatment programs for the various communication disorders within the pre-K-12 grades. This course addresses the logistics and specifics of providing speech, hearing, and language services within the educational team’s multidisciplinary format.

**SPTH 5500. REGIONAL DIALECTS AND URBAN LANGUAGE STUDIES. (3)** Study of American-English speech sounds and language usage in the context of the historical development of the English language. Major consideration is given to dialectal variations with emphasis on differences versus disorders. Multicultural education and intercultural-communication studies are featured throughout the course. Linguistics and sociolinguistics are included.

**SPTH 5510. ADVANCED CLINICAL PRACTICUM: SPEECH-LANGUAGE. (1-6)** Clinical opportunities in the diagnosis evaluation, remediation, management, and counseling of persons with speech-language impairments. All clinical practica are under the supervision of ASHA certified personnel. A required course offered each semester or summer session in residence and that is repeatable (a thru f) up to 6 semester hours.

**SPTH 5520. STUDIES IN ARTICULATION. (3)** Current research studies in articulatory acquisition and behavior. A review of research related to the diagnosis, nature, etiology, and treatment of articulatory disorders is also included.

**SPTH 5530. NEUROANATOMY AND NEUROPHYSIOLOGY OF SPEECH AND HEARING. (3)** Structure, function and vascular supply of the central nervous system. Signs, symptoms, and treatment and prognosis of disorders resulting from damage to specific areas of the central nervous system with emphasis on speech, language, and auditory function.

**SPTH 5560. EXPERIMENTAL PHONETICS. (3)** Overview of the physiological and acoustical analyses in speech perception. Integration of these areas are included with emphasis on the development of the theories associated with speech production and perception.

**SPTH 5570. ANATOMY AND PHYSIOLOGY OF SPEECH. (3)** Detailed study of the anatomical and physiological structures as well as functions of the speech mechanism and its processes.

**SPTH 5580. VOICE DISORDERS. (3)** An interdisciplinary approach to the detection, diagnosis, and therapy in the management of structural, functional and psychogenic voice disorders, and laryngectomy.

**SPTH 5600-5605-5606-5607. INDEPENDENT STUDY. (3-9)** Independent research or literature survey of an area appropriate to communication disorders. consent of the instructor and the major advisor are required.

**SPTH 5630. ADULT APHASIA. (3)** Study of the characteristic nature (etiology and symptomatology) of aphasic disturbances, including principles of evaluation, treatment and management.

**SPTH 5670. INTRODUCTION TO HUMAN COMMUNICATION AND ITS DISORDERS. (3)** A course designed to acquaint teachers, special educators and graduate students with the nature and types of speech, hearing, and language disorders. Rehabilitation and management techniques are explained.

**SPTH 5710. ADVANCED CLINICAL PRACTICUM: AUDIOLOGY. (1-6)** Practical experience in the management of the hearing impaired population. Includes case history, report writing, diagnostic procedures, aural rehabilitation and counseling.

**SPTH 5740. ADVANCED AUDIOLOGY. (3)** The theory and practices of advanced techniques for the assessment of the audiological function; emphasis upon the use of tests in differential diagnosis of auditory lesions and functional hearing losses.

**SPTH 5750. SEMINAR IN AURAL REHABILITATION. (3)** Principles, methods and electroacoustical instrumentation involved in the aural habilitation/rehabilitation of hearing impaired persons. Includes oral and manual communication.

**SPTH 5800. SPEECH SCIENCE & INSTRUMENTATION. (3)** A study of the properties of sound, mechanisms of speech production and perception, and relevant speech science instrumentation. Two lecture periods and one laboratory (1 hour) per week.

**SPTH 6400. NEUROGENIC (MOTOR) SPEECH DISORDERS. (3)** A study of conditions that affect individuals affected by motor disturbances. Differential assessment of dysarthria and apraxia will be taught. Therapeutic programs will include the mechanisms of Phonation, Articulation, Resonance, and Respiration. Neuropathologies of motor speech disorders including etiologies and treatment strategies will be addressed.

**SPTH 6420. MULTICULTURAL LITERACY AND CULTURAL DIVERSITY. (3)** This course will examine: cross-cultural attitudes toward speech disorders; fluency disorders in multicultural populations; hearing disorders in multicultural populations; different learning styles in multicultural populations; and sociolinguistic tools and techniques.

**SPTH 6430. CLINICAL PRACTICUM WITH MINORITY CHILDREN. (3)** This course involves completing a practicum working with minority children. The clinical field experience will focus on assessment and remediation with minority children. Prerequisite: SPTH 6420.

**SPTH 6530. SEMINAR IN STUTTERING. (3)** Studies of traditional theories, and learning theory and conditioning (instrumental and respondent) in stuttering therapy. Examples of behavior modification in the treatment of stuttering will be analyzed and evaluated. Illustrations of operant conditioning therapy and two-factor (operant and classical) theory and therapy will be discussed.

**SPTH 6540. SEMINAR IN ORGANIC SPEECH DISORDERS. (3)** The study of the causes, diagnostic procedures, preventive measures, management techniques, and treatment of Cleft Palate, Cerebral Palsy, Laryngectomy and related organic disorders.

**SPTH 6550. SEMINAR IN LANGUAGE DEVELOPMENT. (3)** Study of the behavioral characteristics of language acquisition and developmental psycho-linguistics. The structure and function of language are included.

**SPTH 6560. STUDIES IN LANGUAGE DISORDERS. (3)** A course designed to acquaint the student with traditional and contemporary methods of diagnosing, treating and managing various disabilities associated with impaired language capacity, with emphasis on current research and methods of investigation of language deficits.

#### Clinical Instructional Staff

**Tyese Hunter, CCC/SLP, B.S., 1991, Auburn University; 1994 M.Ed., Tennessee State University**

#### Graduate Faculty

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

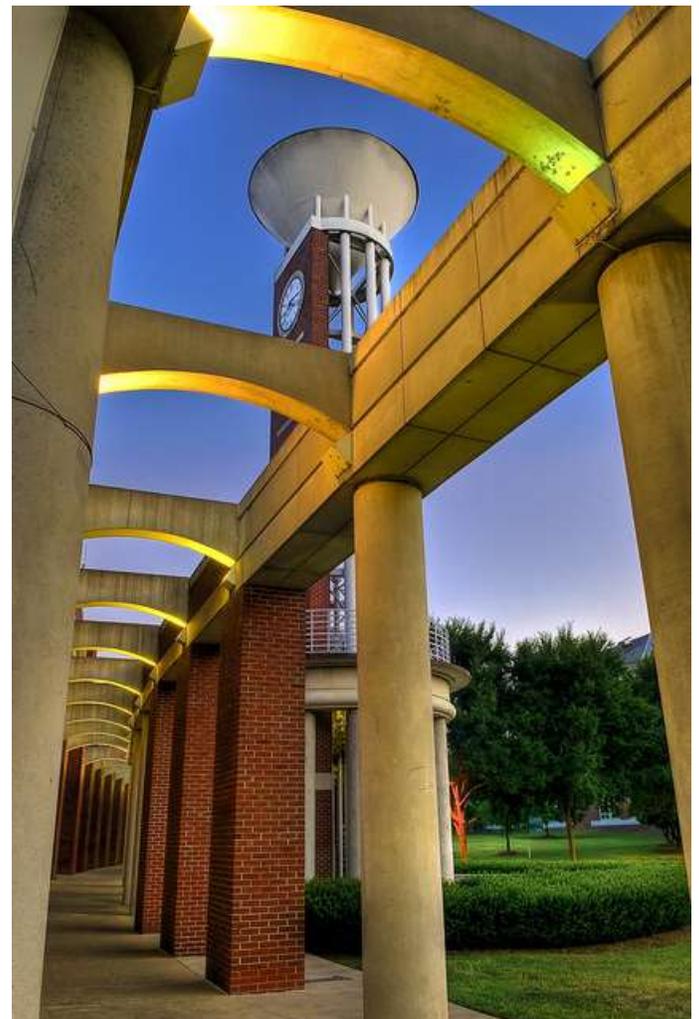
Mary T. Fitzgerald, CCC/SLP, CCC/A, Associate Professor  
B.A., 1968, M.A., 1969, Ph.D., 1985, Vanderbilt University

Terrie D. Gibson, CCC-SLP, Assistant Professor  
B.S., 1980, Elizabeth City State University; M.A., 1981 University of Illinois, Ph.D., 2002, Vanderbilt University

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

Valeria Roberts Matlock, CCC/A, Assistant Professor  
B.S., 1983; M.Ed., 1986; Ed. D., 2003, Tennessee State University

Tina T. Smith, CCC/SLP, Associate Professor and Head  
B.A., 1980; M.A., 1981, South Carolina State College; Ph.D., 1989, University of Illinois



# **COLLEGE OF LIBERAL ARTS**

## COLLEGE OF LIBERAL ARTS

**Gloria C. Johnson, Ph.D., Dean**  
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The College of Liberal Arts offers academic programs designed to engage students in the study of human experience and human potential and to equip them for creatively, critically, and collaboratively shaping their lives, careers, and communities. At the graduate level the College offers a Master's of Criminal Justice in a joint degree program with Middle Tennessee State University. The College also offers courses in English, History, and Music for students pursuing advanced study in these disciplines in association with graduate programs in Education.

### Core Values

**Integrative Learning:** Liberal Arts programs recognize education as an inherently connected, cumulative, and student-centered experience in which learning occurs across courses and across disciplines.

**Creativity:** Liberal Arts programs value and nurture originality, imagination, discovery, the active creation and appreciation of beauty, and the unique voice of each student. Rather than providing "training", they seek to inspire students and draw inspiration from them.

**Responsibility:** Liberal Arts programs recognize the development of integrity, ethical thinking, and social and environmental awareness as essential goals of a college education.

**Critical Thinking and Reasoned Judgment:** Liberal Arts programs recognize discourse and the construction of knowledge as human activities requiring the questioning of assumptions, logical reasoning, analysis and synthesis, the appreciation of multiple perspectives, self-awareness, empathetic capacity, and civility.

**Professional Competency:** Liberal Arts programs value, model, and cultivate excellence in written and oral communication, task organization, collaboration, quantitative thinking, and literacy in information technology, equipping students with transferrable professional skills.

**Student Service and Support:** Liberal Arts programs recognize the quality of the individual student's educational experience as the primary measure of their effectiveness and are committed to the highest standards of service for both traditional and non-traditional students in curriculum design, course offering, instruction, learning assessment, co-curricular activities, and academic and career advisement.

### Accreditation

Individual academic programs in the College of Liberal Arts are accredited by the national, regional, and state agencies which accredit programs. The Music program is accredited by the National Association of Schools of Music (NASM). All teacher certification programs in the College are approved by the Tennessee Department of Education, and the teacher certification program of the University is accredited by the National Council on the Accreditation of Teacher Education (NCATE).

**DEPARTMENT OF  
 CRIMINAL JUSTICE**  
**Deborah Burris-Kitchen, Ph.D.,**  
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The Department of Criminal Justice offers a Master of Criminal Justice (MCJ) degree in cooperation with Middle Tennessee State University.

**MAJOR: CRIMINAL JUSTICE**  
**DEGREE: MASTER OF CRIMINAL JUSTICE**

The Master of Criminal Justice degree is a program offered for the purpose of providing 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 thirty-six (36) hours. The thesis or comprehensive exam will be supervised by faculty designated at the time of admission to Candidacy.

The purpose of the M.C.J. program is to provide students and practitioners in the criminal justice system, the opportunity to obtain advanced education in the area of Criminal Justice.

### Admission Requirements

Unconditional admission to the M.C.J. program requires the student to have a bachelor's degree from an accredited four-year college or university, an undergraduate grade point average of 2.5 or higher on a 4.0 scale, and a minimal score of 137 on the Verbal Reasoning and a minimal score of 138 on Quantitative Reasoning sections of the Graduate Record Examination (GRE), or at least 370 on the Miller Analogies Test (MAT).

Unconditional 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 145 on the Verbal Reasoning section and 146 on the Quantitative Reasoning or the MAT score must be 383. If the GPA is between 2.0 and 2.24, the GRE score must be 149 on the Verbal Reasoning and 150 on the Quantitative, or the MAT score must be 394.

Conditional admission may also be granted to a student with a limited number of deficiencies in undergraduate course prerequisites; these course deficiencies must be removed before enrollment in Criminal Justice courses at the graduate level. The student must remove conditional status by earning at least a B (3.0 average) in the first nine hours of graduate courses; failure to achieve this average will result in withdrawal from the program.

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 courses or an approved equivalent.

### Degree Requirements

The total program consists of thirty-six semester hours of course work.

#### 1. Required Courses (12 Hours)

Six hours of core courses taken at each institution

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

CRMJ 6640	Thesis or CRMJ6630 - Non-Thesis Option	3
CRMJ 6900	Research in Criminal Justice	3
CRMJ 6000	Criminal Justice Administration	3
CRMJ 6010	Seminar in Law	3
CRMJ 6020	Judicial Seminar	3
CRMJ 6030	Contemporary Corrections	3
	Additional Criminal Justice Courses	36

All courses are offered in the evenings, Monday through Thursday, meeting one night per week from 5 PM to 8 PM.

### Program of Study

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

### Admission to Candidacy

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

### DESCRIPTION OF COURSES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Note: Add CRMJ6630. NON-THESIS OPTION. (3) This is a comprehensive examination administered at the end of coursework to students choosing not to engage in a thesis.

## GRADUATE FACULTY

Deborah J. Burris-Kitchen, Professor

B.A., 1988, Indiana University; M.A., 1990, Ball State University; Ph.D., 1995, Western Michigan University

Michael J. Montgomery, Associate Professor

B.S., 1974, Eastern Kentucky University; M.S., 1979, Eastern Kentucky University; Ph.D., 2006 Tennessee State University

Larry D. Woods, Professor

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

## DEPARTMENT OF HISTORY, POLITICAL SCIENCE, GEOGRAPHY, AND AFRICANA STUDIES

**Adebayo Oyebade, Ph.D., Chair**

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The Department of History, Political Science, Geography, and Africana Studies offers graduate courses in History, Political Science and Geography. Although the University does not offer a graduate degree in any of its disciplines, students may earn a History concentration under the M.Ed. degree in Curriculum and Instruction. (See the M.Ed. requirements in the College of Education.) The purpose of this program is to develop teachers of history and the social sciences.

### Admission Requirements

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

Conditional admission may be gained with a lower grade point average, but the GRE or the MAT score must be correspondingly higher. If the undergraduate GPA is between 2.25 and 4.0, the GRE score must be 935 or the MAT score 383. If the GPA is between 2.0 and 2.24, the GRE score must be 1000 or the MAT score 394. Applicants with less than a 2.5 undergraduate GPA must submit test scores at the time of application; applicants with a GPA of 2.5 or above may submit test scores in the first semester of attendance, but it is preferable that they submit test scores at the time of original application.

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

### Degree Requirements

To receive the M.Ed. in Curriculum and Instruction with a concentration in History, the student must complete 33 semester hours, including 15 hours in the Education core, and 18 hours of History. Students in this program will be assigned an advisor in the Department of History, Political Science, Geography and Africana Studies, in addition to his or her principal advisor in the College of Education.

Required Courses: 15 hours

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

History, Geography, and Political Science Courses:  
18 hours of electives in History

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

### Program of Study

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

### Admission to Candidacy

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

### Post-Master's Training

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

## DESCRIPTION OF COURSES

### HISTORY (HIST)

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

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

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

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

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

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

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

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

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

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

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

## GEOGRAPHY (GEOG)

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

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

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

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

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

## POLITICAL SCIENCE (POLI)

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

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

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

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

## GRADUATE FACULTY

Gashawbeza W. Bekele, Assistant Professor

B.A., 1997, Addis Ababa University (Ethiopia); M.Phil., 2001, University of Oslo (Norway); Ph.D., 2007, West Virginia University

Michael T. Bertrand, Associate Professor

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

Sheri B. Browne, Professor

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

Elizabeth Dachowski, Professor

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

Daniel K. Gibran, Professor

B.A., 1976, Middle East College (Lebanon); M.A., 1985, University of Kent at Canterbury (England); Ph.D., 1990, University of Aberdeen (Scotland)

Learotha Williams, Jr., Assistant Professor

B.A., 1996, Florida State University; M.A., 1998, Florida State University; Ph.D., 2003, Florida State University



**COLLEGE OF PUBLIC  
SERVICE  
AND URBAN AFFAIRS**

## COLLEGE OF PUBLIC SERVICE AND URBAN AFFAIRS

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### DEPARTMENT OF PUBLIC ADMINISTRATION

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#### GOALS

The goals of the College of Public Service and Urban Affairs are to support the University's mission by engaging in educational, research, and service programs focusing upon applied public, non-profit, health and urban management and policy. The Department of Public Administration offers the Master of Public Administration (MPA) degree, the Master of Professional Studies degree (MPS), the Ph.D. degree in public administration, the Certificate in Non-Profit Management, the Certificate in Health Administration and Planning, and the Certificate in Executive Leadership.

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

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

**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 contemporary society 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 undertaking systematic inquiry into the discipline.

Since 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 on organizational, managerial, or public policy issues.
3. Higher education institutions with instructors and researchers prepared to represent and advance the field and profession of public administration.  
Classes are scheduled with the fully employed individual in mind. Core and elective courses typically meet one evening per week. In addition, elective courses may be available in hybrid or on-line format.

#### Policies

All applicants to graduate programs in the College of Public Service and Urban Affairs must also consult the Graduate School policies detailed at the beginning of the Graduate Catalog, which pertain to all TSU graduate students. All students are expected to be familiar with and to adhere to both Graduate School policies and specific departmental requirements for their degree and/or graduate certificate.

A cumulative grade point average of 3.0 in all graduate courses taken at Tennessee State University is required for successful completion of graduate certificates or graduate degree programs; individual programs may also have more restrictive policies as detailed in their Catalog section (for example, C grades in core courses are not accepted for the Ph.D. in public administration). We abide by Graduate School policies including those regarding retention, probation, suspension, and time limitations for degrees (see the front matter of this Catalog). Per Graduate School policy, a given course in our programs 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.

#### 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.

PADM 7410 Public Policy Implementation 3  
 Doctoral Electives - 15 credits  
 Elective courses must be selected in consultation with the student’s advisor and may be chosen from program offerings. Upon the recommendation of the student’s advisor and the approval of the department head, a portion of this work may be taken outside of the Department.

Dissertation Research - 12 hours (minimum)

**Transfer Credit**

Students who have credits beyond the Master’s degree may be permitted to apply to transfer a maximum of six credits for course work applicable to public administration to the Ph.D. program, if approved by the department chair.

**Retention**

Students must maintain a cumulative grade point average (GPA) of 3.00 or better on the scale of 4.00, and pass all courses throughout the program to remain in good academic standing. Students must have a grade of B or better in all Ph.D. core courses and may not have more than two C grades in other courses used to meet degree requirements. Per Graduate School policy, a given course in our programs 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. 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 and Graduate School 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.

**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 without requesting permission from the department chair to take additional classes.

**Early Review**

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

**Time Limitation for Credit**

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

**Sequence of courses**

Due to the admission time-line for the Ph.D. program covering the Fall, Spring and Summer semesters, students who are admitted in Spring or Summer can get a head start by taking MPA electives but will not start their PhD coursework until Fall semester with their entire Coursework Cohort. Staffing and enrolments permitting,

**Admission Process and Requirements**

To be considered for admissions, applicants must provide the following items to the Graduate School: (1) Application for Admission to the Graduate School; (2) Application Fee; (3) Graduate Record Examination (GRE) score of at least the 40<sup>th</sup> percentile averaging across the verbal and quantitative sections (only the General Test is required); (4) one official transcripts from all colleges and/or universities previously attended (to be submitted with the Application for Admission); applicants must have a Master’s degree in an associated field from an accredited university and a grade point average of at least 3.25 in previous graduate studies; (5) three letters of recommendation from persons familiar with the applicant’s potential for doctoral level study in public administration; (6) a 500-1,000 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 the applicant’s single-author academic or professional writing (e.g., graduate term paper, thesis, academic/professional clinical study, or policy analysis/management report). Once all these materials have been submitted and minimum requirements for consideration have been met, the department chair will contact the applicant to schedule an admissions interview. Applicants must also receive a positive recommendation from the Ph.D. Admission committee after the interview process, and after the application and all other admission materials have been evaluated.

All applicants are expected to be competent in written and spoken English and must possess basic computer literacy; applicants who have English as a foreign language exam scores below the Graduate School thresholds will not be considered for admission to the MPA. The admission decision will be based on the entire academic and professional record after the conditions specified here have been met. Applicants will be granted unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program.

**Credits Needed**

The Ph.D. degree requires 36 course credits beyond the Master’s degree and at least 12 dissertation credits (total number of dissertation credits will depend on how fast the student progresses in the research phase). 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 complete a Program of Study with the Ph.D. Advisor after the student has completed nine credits of coursework towards the Ph.D. degree.

Quantitative Skills Core - 6 credits		
PADM 7130	Research Methodology in Public Administration	3
PADM 7140	Applied Quantitative Techniques in Public Administration	3
Doctoral Core - 15 credits		
PADM 7000	Theory and Practice of Public Administration	3
PADM 7220	Administrative Management	3
PADM 7230	Public Budgeting II	3
PADM 7310	Public Organization Theory	3

doctoral classes are offered in a cohort pattern that begins every Fall semester. Our expectation is that you will take two courses each semester and plan to stay on track with the cohort course pattern. In general, students should consult with the program advisor for elective courses appropriate to the individual's field of study as well as deficiencies. This guidance applies not only to satisfy individual's special scholarly interests but for reasons of scheduling.

Upon the recommendation of the student's advisor and the approval of the program advisor, a portion of electives may be completed outside the College. These courses must be graduate level and the

### Series A Courses

Students must take **four** PhD courses before the Preliminary exam, which is held after their fourth semester in **Series A**: PADM 7000; PADM 7310; PADM 7410; and either PADM 7130, PADM 7220, or 7230 (this last course will depend if they started in an A1 Fall or an A2 Fall). Each year, the pattern alternates – A1 or A2 (see Series A Table below).

Students can complete A1 and A2 in either order, but they must begin PhD coursework in Fall semester. There is only one Summer semester pattern, which occurs every year. After four semesters of PhD coursework (Fall/Spring/Summer/Fall), students take their **Preliminary Exam** at the next exam offering; if they pass they continue their PhD coursework.

### Series A Semester Pattern

#### EVEN ACADEMIC YEARS (EX. 2015-2016)

##### A1 – Fall

1. **PADM 7000** Theory & Practice of PA
2. Elective

##### A1 – Spring

1. **PADM 7130** Research Methodology
2. Elective

#### EVERY YEAR

##### A – Summer

1. **PADM 7310** Public Organization Theory
2. **PADM 6930** Qualitative Methods

#### ODD ACADEMIC YEARS

(EX. 2016-2017)

##### A2 – Fall

1. **PADM 7410** Public Policy Implementation
2. Elective

##### A2 – Spring

1. **PADM 7230** Public Budgeting II
2. Elective

### Series B Courses

If the student passes the **Preliminary Exam** (see below), they then choose a Chair and file the PhD program of study forms with consultation from the chair and the PhD program advisor, and finish the last (fifth) semester of **Series A** (Spring), then proceed to complete Series B (Fall/Spring plus Qualifying exam the following summer). See **Series B** coursework in the table below.

Once a student has passed the Preliminary Exam, students will also be working with their Chair towards the Qualifying Exam and Prospectus-Defense. To that end, in consultation with their Chair, the student will select the second and third members of their dissertation committee as they are taking the remainder of the PhD Core courses. The second member will be selected from Public Administration Department Faculty, and the third member from the University Graduate faculty.

### Series B Semester Pattern

#### EVEN ACADEMIC YEARS

(EX. 2015-2016)

##### B - Fall

1. **PADM 7220** Administrative Management
2. Elective course (if needed)

*Work with advisor and study for Qualifying Exam*

##### B - Spring

1. **PADM 7140** Applied Quantitative Tech
2. Elective course (if needed)

*Work with advisor and prepare for Qualifying Exam*

#### EVERY YEAR

##### B – Summer

Qualifying Exam (End of Spring or Beginning of Fall)

#### ODD ACADEMIC YEARS

(EX. 2016-2017)

##### B – Fall

1. **PADM 7220** Administrative Management
2. Elective course (if needed)

*Work with advisor and study for Qualifying Exam*

##### B – Spring

1. **PADM 7140** Applied Quantitative Tech
2. Elective course (if needed)

*Work with advisor and prepare for Qualifying Exam*

### Preliminary Examination

After taking the first four Ph.D. core courses, PADM 7000; PADM 7310; PADM 7410; and either PADM 7130, PADM 7220, or 7230, each Ph.D. student must pass the preliminary exam at the first available offering of the exam or they will be dismissed from the program. The preliminary exam is offered in Spring and Fall at mid-semester on the date announced by the department. The student must be in good academic standing both according to Graduate School and Public Administration Department program criteria to sit for this exam, including having no I's or grades lower than a B in the Ph.D. core courses.

If the student passes the preliminary exam he or she will seek a dissertation chair among the faculty. If a student fails, he or she may take the preliminary exam the next time it is offered with the approval of the Ph.D. program committee; but in the meantime he or she may not re-enroll in any additional PhD courses. If he or she fails the preliminary exam two times, the student is dismissed from the Ph.D. program. In this case, he or she may elect to apply for the MPA or MPS program.

### Preliminary Examination format

The exam will consist of multiple essay questions and the student will have some choice regarding which questions to answer. Details will be provided by the department during the semester of the exam. The exam will be administered over the course of one day from 8:00 am to 5:00 pm.

### **Qualifying Examination**

This examination is offered in Spring and Fall on a date determined by the committee. In a student's final semester of Ph.D. coursework, or before the end of the second regular semester following their final semester of coursework, he or she must sit for the Qualifying Examination. For example if a student completed coursework in Fall semester, he or she must sit for their Qualifying exam before the end of the next Fall semester and if they completed coursework in Spring semester, he or she must sit for the Qualifying exam before the end of the next Spring semester.

A student must be in good academic standing both according to Graduate School and Department criteria to sit for the exam, including having no I's or grades lower than a B in the Ph.D. core courses. If, having completed all coursework, an eligible student does not sit for the exam within two regular semesters, he or she is dismissed from the program. If a student fails the qualifying examination and the student's committee approves the request to take it again, he or she may take the qualifying exam again no later than the next available offering (the questions will be different from the first exam). This exam may only be taken twice. If the student does not retake the exam at the next available offering, he or she is dismissed from the program.

### **Qualifying Examination format**

The student's qualifying examination will be developed by the student's committee (Chair and second member at the minimum; the third member can choose to participate.) in conjunction with the other PA faculty. The members of the student's Committee and one outside PA faculty member will assess the overall quality of the qualifying examination with a grade of pass or fail, based on the view of the majority. This is a two-part examination; the first part is written and the second oral. The written examination will consist of a series of questions specific to the student's topical area of interest and one general public administration question. All students who complete the written exam will be required to take the second part of the exam on a different day; it consists of an oral examination by the student's committee and the Public Administration faculty that choose to attend. The oral exam is a free-ranging discussion in which the student must demonstrate public administration competency relevant to their specialization area. The decision of whether a student has passed the qualifying exam will be based on the judgment of the committee considering both the written and oral exam performance of the student.

### **Candidacy**

Once a student has passed the qualifying exam, he or she is a candidate and may register for dissertation credit. All students taking first three dissertation credits must participate in a structured prospectus seminar offered by departmental faculty that will cover project management, the components of a dissertation and idea development, as well as be working actively with their chair and committee on the prospectus. Those credits must be taken during the semester immediately following the successful completion of the qualifying exam requirement.

### **Dissertation Committee**

To review, the selection of Dissertation Committee members is as follows. The Chair is selected immediately after passing the Preliminary exams. The second and third members are selected while the student is completing Ph.D. coursework. The timing of selecting the fourth member and the reader of the Dissertation committee will be determined by the student's Chair.

Some Chairs prefer to select the fourth member and reader before the Prospectus Defense while others prefer to wait until afterwards. The fourth member may be program faculty or a subject matter or methods expert from another department with Graduate Faculty status; the reader is from another department of the University with Graduate Faculty status. This committee of five members will sit as the final examining body for the dissertation defense. If, they have been selected prior to the Prospectus Defense, the fourth and fifth members may also choose to participate in the prospectus defense. Every Dissertation committee must have at a majority of members from the Public Administration faculty.

### **Prospectus Defense**

After completing the first three dissertation credits, students must defend their prospectus within two regular semesters. A student may only attempt to defend a prospectus two times, and the second attempt must take place within one regular semester of the first attempt. If a student does not successfully defend a prospectus within these constraints, the student is dismissed from the program. The format for the Prospectus will be provided to the student by their committee chair.

### **Dissertation**

The student must continue to take dissertation credits, by registering for PADM 8110 every semester (in the section assigned to their dissertation chair) until a total of 12 dissertation credit hours have been accumulated. From that point on, students register for dissertation continuation credits (PADM 8110 Section 35) at a reduced rate. The student must engage in original, scholarly and significant research in public administration or public policy, guided in this endeavor by the 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 draft of the dissertation must be considered suitable for defense by all members of the student's dissertation committee for the defense to occur.

### **Dissertation Defense**

Once the full committee approves the dissertation draft for defense, 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 four of the five examining committee members certify to that effect. Students failing the defense may be reexamined only once, conditional on the approval of the committee. A majority of the committee will determine if "substantial" or "minor" revisions to the dissertation are necessary after a passing defense. Should substantial revision be necessary due to deficiencies in the dissertation draft, the Dissertation Committee will reconvene at a later date to decide if those deficiencies have been fully addressed. The student may not graduate until a majority of the committee approves the major revisions. In cases where minor corrections are required on the dissertation, the Dissertation Committee Chair shall be responsible for seeing that the proper corrections are made and the final document is ready for submission to the Graduate School in preparation for graduation.

**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 agencies. The MPA is accredited by the National Association of Schools of Public Affairs and Administration. It requires 36 credits of coursework plus an internship of 6 credits.

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

#### **Policies**

All applicants to graduate programs in the College of Public Service and Urban Affairs must also consult the Graduate School policies detailed at the beginning of the Graduate Catalog, which pertain to all TSU graduate students. All students are expected to be familiar with and to adhere to both Graduate School policies and specific departmental requirements for their degree and/or graduate certificate. A cumulative grade point average of 3.0 in all graduate courses taken at Tennessee State University is required for successful completion of graduate certificates or graduate degree programs; individual programs may also have more restrictive policies as detailed in their Catalog section (for example, C grades in core courses are not accepted for the Ph.D. in public administration). We abide by Graduate School policies including those regarding retention, probation, suspension, and time limitations for degrees (see the front matter of this Catalog). Per Graduate School policy, a given course in our programs 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.

#### **Admission Process and Requirements**

To be considered for admission, all applicants must provide the following items to the Graduate School: (1) Application for Admission to the Graduate School; (2) application fee; (3) official documentation of the general Graduate Record Examination submitted directly to the Graduate School with a score averaging 20th percentile or above across the verbal and quantitative sections; (4) one official transcript from all colleges and universities previously attended, showing a cumulative GPA of 2.5 or higher for the undergraduate degree; (5) three letters of recommendation on letterhead or the Graduate School recommendation form from persons familiar with the applicant's potential for masters-level study in public administration; and (6) a 500- to 1,000-word Statement of Purpose discussing why the applicant is interested in a master's degree, and why the master's program in public administration specifically is a good fit for their goals. All applicants are expected to be competent in written and spoken English and must possess basic computer literacy; applicants who have English as a foreign language exam scores below the Graduate School thresholds will not be considered for admission to the MPA. The admission decision will be based on the entire academic and professional record after the conditions specified here have been met. Applicants will be granted

unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program.

**Prerequisite:** All applicants are required to have completed satisfactorily (i.e., grade of C or higher) POLS 2010 (American National Government), URBS 2010 (Introduction to Urban Studies) or URBS 4700 (American Government Institutions and Urban Governance) or an equivalent undergraduate course in government prior to unconditional admission. A graduate-level course in this subject can also be used to meet this requirement.

Applicants who have not submitted a qualifying score on the Graduate Record Examination and/or have not satisfied the American Government course prerequisite may be conditionally admitted for one term only. Students admitted conditionally must submit an acceptable Graduate Record Examination test score and/or proof of satisfaction of the prerequisite by the end of the first semester of enrollment. A conditionally admitted student who does not satisfactorily meet all conditions by this deadline may not be allowed to register for further coursework in the MPA program until conditions are met.

#### **Advisor**

Each student admitted to the MPA program is assigned an advisor; advisors are listed by program responsibility on the department website. Students should consult with their advisors prior to registering for classes in each term of enrollment. It is the student's responsibility to contact the advisor when consultation is needed.

#### **Degree Requirements**

- A. Master's Core. Students must satisfy the nine-course core requirement plus any prerequisite courses. Enrollment in a specific course may be waived for students having equivalent graduate course work. Waiver of a core course requirement does not reduce the total credit hours which must be earned toward the degree.
- B. Electives. Students may select, with the approval of their advisors, any three 6000 level courses offered by the Department. With the permission of the student's advisor, a maximum of 12 semester credit hours of coursework may be taken outside of the Department, including courses transferred from another institution.
- C. Internship. The total credit hours for the MPA include 6 credits for a supervised internship of 300 hours. Students typically work for state or city agencies acquiring practical experience in government or in an appropriate nonprofit agency. All internships must be approved by the internship coordinator prior to the student making a commitment to an agency. Students may be approved for an internship after completing 15 credit hours of course work.
- D. Students with one year or more of significant public, nonprofit, or healthcare professional administrative experience may be exempted from the internship requirement and have a reduction of 6 credits in the total credits required for the MPA. This exemption is contingent on advisor approval of the exemption application, and must be discussed with the advisor at the time of program of study filing or before. 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. Further instructions should be sought from the advisor.

- E. Comprehensive Examination. Students must pass a written comprehensive examination, taken no earlier than the term in which all coursework is completed.
- F. Writing Portfolio. Each student is required to assemble and submit a writing portfolio, which must be judged as passing prior to graduation. It should be submitted in the semester of graduation. Typically this is due within one week of the comprehensive exam. Detailed instruction on the writing portfolio may be found on the CPSUA website.

**Course Scheduling**

Courses are scheduled with the fully-employed individual in mind with a variety of delivery and timing options such as on-line, hybrid (both on-line and in class) and traditional in-class course offerings. However, check the course schedule each semester for course offerings and types of course delivery; it is not possible to offer every course in each mode of delivery each semester

**PROGRAM OF STUDY**

**Required Core Courses, all students - 27 credits**

PADM 6110	Statistics for Public Administrators	3
PADM 6130	Research Methods in Public Administration	3
PADM 6150	Information Technology in the Public Sector	3
PADM 6210	Seminar in Public Administration	3
PADM 6230	Seminar in Fiscal Management: Public Budgeting	3
PADM 6240	Seminar in Staff Functions: Public Personnel	3
PADM 6310	Seminar in Organization Theory	3
PADM 6410	Seminar in Policy Analysis	3
PADM 6490	Seminar in Politics of Administration	3
PADM 6500	Internship in the Public Service (unless student is exempted)—6 credits	

**Internship – 6 additional credits unless exempted**

PADM 6500	Internship in the Public Service	6
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**Concentration or Elective Courses - 9 credits**  
 Each MPA student will be required to complete 9 elective credits which may be chosen from Healthcare Administration & Planning certificate courses, Nonprofit Management certificate courses or general MPA elective courses. Elective choices must be discussed with the advisor.

**MAJOR: PROFESSIONAL STUDIES**  
**DEGREE: MASTER OF PROFESSIONAL STUDIES (MPS)**  
**CONCENTRATIONS:**  
 STRATEGIC LEADERSHIP  
 HUMAN RESOURCES LEADERSHIP  
 TRAINING AND DEVELOPMENT

The Master of Professional Studies program is designed to affordably and flexibly meet the education needs of working adults who are not generally served by traditional methods. Offered completely online and available twenty-four hours and seven days a week, this unique program is taught by professors who are best suited to help you develop the skills necessary to excel in your career field.

This course is developed and taught in conjunction with the Tennessee Board of Regents (TBR) and the Regents Online Campus Collaborative (ROCC, previously known as RODP). Because the MPS degree is offered online, the student must follow the ROCC hardware and software requirements, and is eligible to complete all registration, advising, bookstore purchases, and even conduct library research online through both the ROCC website and the TSU website.

This graduate professional degree consists of 33 hours of interdisciplinary coursework and is available in three concentrations.

**Policies**

All applicants to graduate programs in the College of Public Service and Urban Affairs must also consult the Graduate School policies detailed at the beginning of the Graduate Catalog, which pertain to all TSU graduate students. All students are expected to be familiar with and to adhere to both Graduate School policies and specific departmental requirements for their degree and/or graduate certificate. A cumulative grade point average of 3.0 in all graduate courses taken at Tennessee State University is required for successful completion of graduate certificates or graduate degree programs; individual programs may also have more restrictive policies as detailed in their Catalog section (for example, C grades in core courses are not accepted for the Ph.D. in public administration). We abide by Graduate School policies including those regarding retention, probation, suspension, and time limitations for degrees (see the front matter of this Catalog). Per Graduate School policy, a given course in our programs 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.

**Admissions Process**

Applicants for admission must provide the following: 1) Application for Admission to the Office of Graduate Studies and Research; 2) application fee; 3) Graduate Record Examination scores; 4) one official 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 MPS program.

**Admission Requirements**

- Students must hold a bachelor’s degree from an accredited college or university. They must be in good standing at the last school attended.
- Students must possess basic computer literacy and writing skills
- Students must adhere to the admission deadlines.

**Unconditional Admission:**

- 1) An undergraduate grade point average of at least 2.75 on a 4.0 scale from an accredited college or university.
- 2) An acceptable score on the GRE, generally at least 146 verbal and 144 quantitative and a 4.0 on analytical writing.

Applicants with five or more years of qualified professional work experience may submit a portfolio in lieu of the GRE. The portfolio is to include: a resume which shows the type of work done over the period and provides details of the employers; position descriptions of all positions listed on the resume; a 500 to 600 word essay describing the professional work accomplished and how the MPS will help the individual advance in the profession; examples of written documents showing professional responsibilities, honors and professional achievements; and a list of professional awards/recognitions. The portfolio material must be submitted as a packet, not mailed separately. Applicants should submit their applications and the GRE scores or portfolio to the Office of Graduate Studies and Research of Tennessee State University. The admission decision will be based on the entire academic and professional record. Applicants will be granted unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program.

**Conditional Admission:**

Conditional Admission into the MPS program may be granted temporarily by the Dean of Graduate Studies and Research upon the recommendation of the Department of Public Administration. Continuation in the program as a degree-seeking student is contingent upon fulfilling specific requirements stipulated in the conditional admission letter.

1. Graduates of accredited colleges who have not taken the Graduate Record Examination (and do not have five years of qualified professional experience) must take the GRE during the first semester of enrollment (prior to mid-term is preferred) in courses for graduate credit. They must also obtain a 3.00 GPA in all classes the first year or until unconditionally accepted.
2. Graduates of accredited colleges who have five years of qualified professional experience but who do not have completed portfolios must submit the requested documents during the first semester of enrollment (prior to mid-term is preferred) in courses for graduate credit. They must also obtain a 3.0 GPA in all classes the first year or until unconditionally accepted.
3. Students who present a grade point average (GPA) below 2.75 must, at the time of application, submit GRE scores or portfolio which are acceptable to the Department of Public Administration. After admission, those students are required to obtain a 3.00 GPA in the first nine (9) semester hours of coursework.

**Advisor:**

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

**Degree Requirements:**

Total credits required for graduation: 33

Students in the MPS program are required to take 33 total credits for graduation. The students cannot take more than 3 courses in any one discipline. Students transferring to the program cannot transfer more than 12 hours

**CONCENTRATION I: STRATEGIC LEADERSHIP**

The Master of Professional Studies with a Concentration in Strategic Leadership prepares students to lead in today’s rapidly changing professional environment. Because the MPS degree is offered completely online, it offers the flexibility to plan your education around your schedule, family activities, and job demands. This graduate professional studies degree consists of 33 hours of interdisciplinary coursework in the areas of leadership, communication, strategic planning and assessment, organizational structure, research, and data analysis.

A. Core Courses: Students will complete the following three core courses for nine credit hours.

PRST 5100	Professional Environment: Issues and Ethics	3
PRST 5200	Globalization and the Professions	3
PRST 5300	Research Methods	3

B. Concentration for Strategic Leadership: Students will complete seven of the following courses, including at least one course from each of the five subject areas.

Leadership Theory		
PRST 5500	Foundations of Leadership	3
LDSP 5000	Current Issues and Cases in Leadership	3
ELPA 5560	Small Group Leadership	3
Research/Data Analysis		
PRST 5770	Computer-Based Decision Modeling	3
PRST 5600	Statistical Analysis	3
Organizational Structure and Change		
PRST 5310	Leadership in Organization	3
PRST 5800	Organizational Skills and Development	3
Communication		
COMM 5110	Leadership and Communication	3
JOUR 5450	Public Relations Management	3
PRST 5700	Conflict Management and Negotiation	3
Strategic Planning and Assessment		
TECH 5105	Project Planning and Scheduling	3
PRST 5040	Human Resources Management	3
C. Professional Project: The Master of Professional Studies program requires every student to complete a professional project as the culmination in earning the degree.		
PRST 5998	Professional Project	3

**CONCENTRATION II: HUMAN RESOURCES LEADERSHIP**

Human Resources Leadership prepares you for a leadership role in the area of human resources. The interdisciplinary approach is appropriate because of the many skills and knowledge areas that are needed for success in this field.

A. Core Courses: Students will complete the following three core courses for nine credit hours.

PRST 5100	Professional Environment: Issues and Ethics	3
PRST 5200	Globalization and the Professions	3
PRST 5300	Research Methods	3

B. Concentration for Human Resources Leadership: Students will complete the following four courses for twelve credit hours.

PRST 5040	Human Resources Management	3
PRST 5600	Statistical Analysis	3
PRST 5910	Employment and Human	

	Resources Law	3
PRST 5920	Diversity in the Workplace	3

C. Students will select one of the following courses for three credit hours.

PRST 5500	Foundations of Leadership	3
PRST 5310	Leadership in Organization	3

D. Students will select two of the following courses for six credit hours.

PRST 5700	Conflict Management and Negotiation	3
PRST 5930	Compensation and Benefits	3
PRST 5940	Recruitment, Selection and Retention	3
PRST 5400	Instructional Design Training and Development	3
COMM 5110	Leadership and Communication	3
JOUR 5450	Public Relations Management	3
TECH 5105	Project Planning and Scheduling	3

C. Professional Project: The Master of Professional Studies program requires every student to complete a professional project as the culmination in earning the degree

PRST 5998	Professional Project	3
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### CONCENTRATION III: TRAINING AND DEVELOPMENT

Training and Development prepares individuals to manage, deliver and assess on-site training programs. It also addresses the needs of human resource managers and other professionals who are increasingly relying on technology to deliver workforce education.

A. Core Courses: Students will complete the following three core courses for nine credit hours.

PRST 5100	Professional Environment: Issues and Ethics	3
PRST 5200	Globalization and the Professions	3
PRST 5300	Research Methods	3

B. Concentration for Training and Development: Students will complete five of the following courses for fifteen credit hours.

PRST 5770	Computer-Based Decision Modeling	3
OR		
PRST 5600	Statistical Analysis	3
PRST 5410	Evaluation of Learning	3
PRST 5420	Organizational Needs Analysis	3
PRST 5400	Instructional Design for Training and Development	3
PRST 5470	Facilitation of Learning	3

C. Specialization Options: Students will complete two courses for six credit hours.

PRST 5430	Advanced Instructional Design for Training and Development	3
TECH 5105	Project Planning and Scheduling	3
PRST 5020	Human Resources Management	3
PRST 5440	Engaging the Adult Online Learner	3
PRST 5450	Computer-Based Technologies for E-Training	3
PRST 5910	Employer and Human Resources Law	3
PRST 5920	Diversity in the Workplace	3

C. Professional Project: The Master of Professional Studies program requires every student to complete a professional project as the culmination in earning the degree

PRST 5998	Professional Project	3
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### MAJOR: HEALTHCARE ADMINISTRATION AND PLANNING

### CERTIFICATE: HEALTHCARE ADMINISTRATION AND PLANNING

The Graduate Certificate in Health Administration and Planning is a 15-credit program offered by the College 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 College 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.

#### Policies

All applicants to graduate programs in the College of Public Service and Urban Affairs must also consult the Graduate School policies detailed at the beginning of the Graduate Catalog, which pertain to all TSU graduate students. All students are expected to be familiar with and to adhere to both Graduate School policies and specific departmental requirements for their degree and/or graduate certificate. A cumulative grade point average of 3.0 in all graduate courses taken at Tennessee State University is required for successful completion of graduate certificates or graduate degree programs; individual programs may also have more restrictive policies as detailed in their Catalog section (for example, C grades in core courses are not accepted for the Ph.D. in public administration). We abide by Graduate School policies including those regarding retention, probation, suspension, and time limitations for degrees (see the front matter of this Catalog). Per Graduate School policy, a given course in our programs 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.

#### Admission Process

To be considered for admission, applicants for the Graduate Certificate 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 showing at least a 2.0 cumulative grade point average. The admission decision will be based on the entire academic and professional record after the conditions specified here have been met. Applicants will be granted unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program. The graduate certificate is not a degree, and certificate completers do not walk at Commencement ceremonies unless they are completing a degree program at the same time.

Students admitted to the certificate program who wish to apply their certificate credits toward completion of the MPA degree must also apply for the MPA degree, meet all MPA admission standards, and be admitted.

## Advisor

Each student will be assigned an adviser upon official admission; advisors are listed by program responsibility on the department website. Students should consult with their advisors prior to registering for classes in each term of enrollment. It is the student's responsibility to contact the advisor when consultation is needed.

### Certificate Program of Study

The required courses are:

PADM 6190	Financial Management for Health and Non-Profit Organizations	3
PADM 6515	Health Organization & Delivery Systems	3
PADM 6550	Epidemiology	3

Electives include:

PADM 6110	Statistics for Public Administrators	3
PADM 6130	Research Methods in Public Administration	3
PADM 6510	Management of Health Agencies	3
PADM 6520	Health Policy in the U.S.	3
PADM 6530	Topics in Administration of Health and Human Services Programs	3
PADM 6540	Planning and Problem Solving in Health Services	3

Individuals pursuing the certificate only must take all five courses (three required and two electives). Unconditionally admitted MPA students must complete the three required certificate courses (PADM 6190; PADM 6515; PADM 6550) in order to obtain the Health Administration & Planning certificate. The Certificate will not be awarded before the successful completion of the MPA in this case.

## MAJOR: NON-PROFIT MANAGEMENT

### CERTIFICATE:NON-PROFIT MANAGEMENT

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

### Policies

All applicants to graduate programs in the College of Public Service and Urban Affairs must also consult the Graduate School policies detailed at the beginning of the Graduate Catalog, which pertain to all TSU graduate students. All students are expected to be familiar with and to adhere to both Graduate School policies and specific departmental requirements for their degree and/or graduate certificate.

A cumulative grade point average of 3.0 in all graduate courses taken at Tennessee State University is required for successful completion of graduate certificates or graduate degree programs; individual programs may also have more restrictive policies as detailed in their Catalog section (for example, C grades in core courses are not accepted for the Ph.D. in public administration). We abide by Graduate School policies including those regarding retention, probation, suspension, and time limitations for degrees (see the front matter of this Catalog). Per Graduate School policy, a given course in our programs 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.

### Admission Process

To be considered for admission, applicants for the Graduate Certificate 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 showing at least a 2.0 cumulative grade point average. The admission decision will be based on the entire academic and professional record after the conditions specified here have been met. Applicants will be granted unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program. The graduate certificate is not a degree, and certificate completers do not walk at Commencement ceremonies unless they are completing a degree program at the same time.

Students admitted to the certificate program who wish to apply their certificate credits toward completion of the MPA degree must also apply for the MPA degree, meet all MPA admission standards, and be admitted.

### Advisor

Each student will be assigned an adviser upon official admission; advisors are listed by program responsibility on the department website. Students should consult with their advisors prior to registering for classes in each term of enrollment. It is the student's responsibility to contact the advisor when consultation is needed.

### Certificate Program of Study

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

Individuals pursuing the certificate only must take all five courses. Unconditionally admitted MPA students must complete PADM 6190 and two of the remaining four required certificate courses as their MPA electives in order to obtain the Non-Profit Management certificate, along with the MPA degree. The Certificate will not be awarded before the successful completion of the MPA in this case.

## MAJOR: PUBLIC ADMINISTRATION EXECUTIVE LEADERSHIP

### CERTIFICATE: PUBLIC ADMINISTRATION EXECUTIVE LEADERSHIP

The Public Administration Executive Leadership certificate is AN 18-credit program of study designed for working professionals in governmental or nonprofit leadership positions that are defined as, or similar to, but not limited to, the federal definition for executive service adopted by the U.S. Office of Personnel Management in 2012. The certificate intends to train and educate participants in successful leadership skills necessary for carrying out the business of government based on proven methods of managing human and budgetary resources in complex organizations.

#### Policies

All applicants to graduate programs in the College of Public Service and Urban Affairs must also consult the Graduate School policies detailed at the beginning of the Graduate Catalog, which pertain to all TSU graduate students. All students are expected to be familiar with and to adhere to both Graduate School policies and specific departmental requirements for their degree and/or graduate certificate. A cumulative grade point average of 3.0 in all graduate courses taken at Tennessee State University is required for successful completion of graduate certificates or graduate degree programs; individual programs may also have more restrictive policies as detailed in their Catalog section (for example, C grades in core courses are not accepted for the Ph.D. in public administration).

We abide by Graduate School policies including those regarding retention, probation, suspension, and time limitations for degrees (see the front matter of this Catalog). Per Graduate School policy, a given course in our programs 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.

#### Admission Process

The Public Administration Executive Leadership certificate is a cohort-only program and participants must be chosen by a sponsoring governmental or nonprofit agency.

To be considered for admission, applicants for the Graduate Certificate 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 showing at least a 2.0 cumulative grade point average. The admission decision will be based on the entire academic and professional record after the conditions specified here have been met. Applicants will be granted unconditional admission if the overall record (based on the above variables) indicates a high potential for success in the program. The graduate certificate is not a degree, and certificate completers do not walk at Commencement ceremonies unless they are completing a degree program at the same time.

#### Advisor

Each student will be assigned an adviser upon official admission; advisors are listed by program responsibility on the department website. Students should consult with their advisors prior to registering for classes in each term of enrollment. It is the student's responsibility to contact the advisor when consultation is needed.

#### Certificate Program of Study

PADM 6270 Seminar in Administrative Leadership	3
PADM 6260 Budgeting as a Management Tool	3
PADM 6320 Organizational Analysis	3
PADM 6900 Special Topics	3
PADM 6930 Special Topics	3
PADM 6940 Special Topics	3

Individuals pursuing the certificate will take all six courses.

Courses may count as electives in the MPS and MPA degrees

#### COURSE DESCRIPTIONS

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

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

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

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

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

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

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

**PADM 6230. SEMINAR IN FISCAL MANAGEMENT: PUBLIC BUDGETING. (3)** This course views budgeting in a broad perspective providing a familiarity with the economic and political implications of public budgeting; the budgetary process; types and uses of budgetary data systems; and recent efforts to rethink budgetary techniques at the federal, state, and local levels in government. Required for MPA. (Formerly PA 623)

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

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

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

**PADM 6270. SEMINAR IN ADMINISTRATIVE LEADERSHIP: THE PUBLIC EXECUTIVE. (3)** This seminar examines alternative theories and approaches to leadership in organizations and their implications for the public manager. Students successfully completing the LEAD Tennessee program may receive 3 graduate course credits for this course that may be applied to either the MPA program, the MPS program, or the graduate certificate in Executive Leadership program.

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

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

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

**PADM 6330. SEMINAR IN PUBLIC MANAGEMENT. (3)** The seminar examines selected problems in public management.

**PADM 6360. SEMINAR IN ORGANIZATIONAL BEHAVIOR. (3)** This seminar is a study of organizational behavior as a product of interactions between and among organizational members.

**PADM 6390. ETHICS AND VALUES IN THE PUBLIC SERVICE. (3)** This course is a critical investigation of ethics, ideals and values commonly attributed to public service in the United States. These include efficiency, competence and responsibility; rule of law; democratic participation; public interest and compassion.

**PADM 6410. SEMINAR IN PUBLIC POLICY ANALYSIS. (3)** The focus of this seminar is on the role of administrators in policy analysis and decision-making, with emphasis on the study of methods and techniques by which public policies can be analyzed and evaluated. Required for MPA.

**PADM 6430. SEMINAR IN CONTEMPORARY PUBLIC POLICIES. (3)** The purpose of this seminar is to examine problems in one or more public policy areas from political and administrative perspectives. Topics will be selected by the instructor. (May be repeated once as different topics are selected for course focus.)

**PADM 6440. SEMINAR IN URBAN ADMINISTRATION. (3)** This seminar is an analysis of political institutions and administrative processes in metropolitan areas.

**PADM 6470. SEMINAR IN TENNESSEE GOVERNMENT. (3)** This seminar is an intensive analysis of selected governmental problems in Tennessee.

**PADM 6480. SEMINAR IN BUSINESS AND GOVERNMENT. (3)** The focus of this seminar is government regulations and the interrelationship and interdependence of the public and private sectors.

**PADM 6490. SEMINAR IN POLITICS OF ADMINISTRATION. (3)** This seminar addresses the ways in which parties, political action committees, interest groups, legislators, the courts, other agencies and professional groups shape administrative action, public policy and organizational structure(s). Required for MPA.

**PADM 6500. INTERNSHIP IN THE PUBLIC SERVICE. (6)** Students not exempt from the internship requirements will fulfill the internship under a joint administrative arrangement between the MPA program and a designated agency. Permission of instructor or program director required.

**PADM 6510. MANAGEMENT OF HEALTH AGENCIES. (3)** This course surveys the major administrative approaches within public agencies that administer health programs. Skills are developed through case problem-solving.

**PADM 6515. HEALTH ORGANIZATIONS AND DELIVERY SYSTEMS. (3)** This seminar examines selected topics in health organizations & delivery systems. The course examines broad contemporary topics as well as traditional and routine management information systems employed in the health care sector.

**PADM 6520. HEALTH POLICY IN THE U.S. (3)** This course is a study of the organization and delivery of health services in the U.S. Current problems affecting the delivery of services and alternative systems and reforms are analyzed.

**PADM 6530. TOPICS IN ADMINISTRATION OF HEALTH AND HUMAN SERVICES PROGRAMS. (3)** Selected topics in the areas of health and human service administration provide the focus of this course.

**PADM 6540. PLANNING AND PROBLEM SOLVING IN HEALTH SERVICES. (3)** Health program planning approaches are reviewed and analyzed in this course, including means of organizing community and public organizations to solve particular health problems.

**PADM 6550. EPIDEMIOLOGY. (3)** This seminar examines the distribution and determinants of health related outcomes in specified populations. Emphasis is placed upon the historical origins of the discipline, measurement techniques, data and error sources, etiological reasoning, disease screening and injury control. Required for Health Planning Certificate.

**PADM 6560. GOVERNMENT PURCHASING. (3)** Addresses the issues and challenges facing managers involved in or with the procurement of products, services and construction for state and local government. Special attention is given to the impact of effective purchasing and construction on government operations and service delivery, as well as the changing role of procurement officers.

**PADM 6600. INDEPENDENT READING IN PUBLIC ADMINISTRATION.** (3) Selected topics are examined under an arrangement between students and an instructor. Permission of the instructor is required prior to registering for this course. May be repeated once upon approval of adviser.

**PADM 6610. STATE AND LOCAL FINANCIAL MANAGEMENT.** (3) Managerial approaches and techniques, conceptual ideas and theories, and institutional knowledge of state and local government financial management are topics to be considered in this course.

**PADM 6630. APPLIED BUDGETING AND FINANCIAL MANAGEMENT.** (3) This course offers a critical review of public budgeting and financial management processes and systems. The student will undertake a substantive evaluation of an on-going financial management operation or process.

**PADM 6900. SPECIAL TOPICS IN PUBLIC ADMINISTRATION.** (1-6) This course pursues selected topics in the area of public administration. Credits earned may not be applied towards the MPA degree, but may be applied toward other graduate degrees.

**PADM 6910. SPECIAL TOPICS IN PUBLIC ADMINISTRATION.** (1) Focusing on particular topics in the area of public administration, this course may be repeated twice as different topics are selected.

**PADM 6920. SPECIAL TOPICS IN PUBLIC ADMINISTRATION.** (2) Focusing on particular topics in the area of public administration, this course may be repeated twice as different topics are selected.

**PADM 6930. SPECIAL TOPICS IN PUBLIC ADMINISTRATION.** (3) Focusing on particular topics in the area of public administration, this course may be repeated twice as different topics are selected.

**PADM 6940. SPECIAL TOPICS IN PUBLIC ADMINISTRATION.** (3) The intent of this course is to provide special study on selected topics in the area of public administration. May be repeated once upon approval of adviser.

**PADM 6950. INTRODUCTION TO NON-PROFIT ORGANIZATIONS.** (3) This seminar presents an overview of the history, operation and structure of non-profit organizations. Particular attention is paid to the legal requirements of incorporation and the ethical and philosophical orientation of such organizations.

**PADM 6960. RESOURCE DEVELOPMENT FOR NON-PROFIT ORGANIZATIONS.** (3) This course focuses on the various sources of revenue available to support non-profit organizations and techniques for marshaling this support. Topics include: demographic, geographic and cultural forces; types of donors and donor institutions; the fund raising process; planning a campaign; techniques and strategies; marketing strategies; requisites for successful and ethical fund-raising; federal and state regulations.

**PADM 6970. 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.

**PADM 6980. STRATEGIC PLANNING AND MANAGEMENT ISSUES FOR NON-PROFIT ORGANIZATIONS.** (3) This seminar will address important management and strategic planning issues facing non-profit administrators.

**PRST 5100. PROFESSIONAL ENVIRONMENT: ISSUES AND ETHICS.** (3) Overview of ethics in general, with practical tools for assessing ethical dimensions of professional life, diagnosing or identifying the moral issues at hand, and then developing reasonable options to address particular moral and ethical issues. Required for MPS.

**PRST 5200 GLOBALIZATION AND THE PROFESSIONS.** (3) The purpose of this course is to assess the impact of globalization on professional life. The course examines globalization as it relates to commerce, information flow, mass media, government, health care and education. Required for MPS.

**PRST 5300 RESEARCH METHODS.** (3) The study and application of research methods appropriate to professional studies. The course will provide a general introduction to research methods, as well as providing practical exposure to problem statements, literature reviews, writing the research proposal, and organization of the research report. Quantitative and qualitative research methodologies will be covered. Required for MPS.

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 Department chair of Public Administration.

**PADM 7000. SEMINAR IN THEORY AND PRACTICE OF PUBLIC ADMINISTRATION.** (3) This seminar involves analysis and survey of the seminal literature impacting upon the development of the study of public organizations in general and the study of public administration as a discipline. Required for Ph.D.

**PADM 7130. RESEARCH METHODOLOGY IN PUBLIC ADMINISTRATION.** (3) This seminar includes an advanced survey of topics in research design. Students must complete a quantitative research design as part of requirements for the course. Required for Ph.D.

**PADM 7140. APPLIED QUANTITATIVE TECHNIQUES IN PUBLIC ADMINISTRATION.** (3) This seminar focuses on the analysis of large or small data sets through the utilization of the Statistical Package for Social Sciences or through some other software package. Report writing functions are covered. Required for Ph.D.

**PADM 7220. SEMINAR IN ADMINISTRATIVE MANAGEMENT.** (3) This seminar emphasizes management tools as applied to public institutions. Required for Ph.D.

**PADM 7230. PUBLIC BUDGETING II.** (3) This seminar addresses advanced topics in public budgeting. Required for Ph.D.

**PADM 7310. SEMINAR IN PUBLIC ORGANIZATION THEORY.** (3) This seminar includes a critical review of theoretical developments and recent trends in organization theory and an analysis of the relevance of those developments for public sector managers. Required for Ph.D.

**PADM 7410. SEMINAR IN PUBLIC POLICY IMPLEMENTATION.** (3) This seminar focuses on models of the implementation phase of the policy process drawing on organization theory, decision-making and innovation literature. Required for Ph.D.

**PADM 8110. DISSERTATION RESEARCH.** (3-12) This course may be repeated. Required for Ph.D. Section 35 is continuation credit, and may only be taken after the student has completed 12 regular dissertation credits.

## GRADUATE FACULTY

Ken Chilton, Assistant Professor

B.A., Centre College; MPA University of Louisville; Ph.D. University of Louisville 1999

Michael Harris, Professor and Dean, College of Public Service and Urban Affairs

B.A., Bar Ilan University, Israel, 1982; M.A., Tel Aviv University, Israel, 1986; Ph.D., 1993, Indiana University

Ann-Marie Rizzo, Professor

B.A., 1969, Ithaca College; M.A., 1971, Ph.D., 1974, Syracuse University

Alex S. Sekwat, Professor and Interim Dean, School of Graduate Studies and Research

B.S., 1985, University of Khartoum; M.P.A., 1988, Arkansas State University; Ph.D., 1994, Florida Atlantic University  
 Megan E. Streams, Associate Professor

B.S., 1994, M.S., 1996, Pennsylvania State University; M.P.A., 2004, Ph.D. 2007, University of Kentucky  
 Rodney E. Stanley, Professor and Department Chair

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

**DEPARTMENT OF SOCIOLOGY, SOCIAL WORK & URBAN PROFESSIONS**

**Oscar Miller, Ph.D., Department Chairman**

**212J Elliott Hall**

**615-963-5511**

**omiller@tnstate.edu**

**MID-TENNESSEE COLLABORATIVE MASTERS OF SOCIAL WORK (MTC-MSW) PROGRAM**

**Michael A. Wright, PhD, LAPSW**

**Interim Director, Social Work Program**

**Tennessee State University**

**310G Jane E. Elliott Hall (Women’s Building)**

**615-963-7641**

**MAJOR: SOCIAL WORK**

**DEGREE: MASTERS OF SOCIAL WORK**

**The Masters of Social Work (MSW) is offered as a collaborative Program with Middle Tennessee State University and Austin Peay State University.**

**Mission**

The mission of the Mid-Tennessee Collaborative Master of Social Work Program, is dedicated to the enhancement of human well-being, diversity, and social justice through developing and improving systems of public social services, especially for children and families, by offering graduate training in Social Work with a hybrid model of delivery. The purpose of the Mid-Tennessee Collaborative Master of Social Work (MTC-MSW) Program is to prepare students for Advanced Generalist Social Work Practice with systems of all types and sizes in both rural and urban areas; to prepare knowledgeable and competent professionals; and to provide leadership in the development of social delivery services, especially public social services.

**Program Goals**

The goals of the MTC-MSW Program emerge directly from the defined mission, the character of the region to be served, and the body of social work literature on the efficacy of the advanced generalist model for professional social work practice. To fulfill the above mission, the six goals of the MSW program are:

1. To prepare a diverse student population for advanced generalist social work practice based on professional values and ethics to serve client systems of various sizes and types.
2. To promote the development of social policies and services to reduce the impact of poverty, oppression and discrimination.
3. To develop analytical skills and critical thinking that will encourage active participation in the development, evaluation, and improvement of social work knowledge and skills through research aimed at advancing social work practice.

4. To promote the development of a multiple theoretical orientation applicable across system sizes.
5. To provide an understanding of diversity and cultural competence with an emphasis on social justice, empowerment, and improving the well-being of people.
6. To socialize students to the profession of social work and the organizational environment through evidenced based practice.

**Admission Requirements**

Students must first be admitted to the Graduate School/College of their home campus. The minimum GPA for admission to the foundation (two year) program at TSU is 2.75. All application materials are submitted directly to the TSU School of Graduate Studies and Research or their selected home campus. The application will consist of:

1. A completed MSW Application Form which includes an essay.
2. Three (3) letters of recommendation from professionals who can address the applicant's interest in social work; their potential for successfully completing a Master’s program; and potential for professional social work practice.
3. Complete a Graduate Record Examination (GRE General Test). All scores are submitted directly to the TSU School of Graduate Studies and Research.

Students applying for Advanced Standing must have completed a Bachelor of Social Work from a program accredited by the Council on Social Work Education and have a minimum GPA of 3.0 in their undergraduate course work.

**Degree Requirements**

The program structure is as follows:

Students may attend either full time or part-time. Full time foundation (two year) students will complete the program in two years. Part-time foundation (two year) students will complete the program within four years. Full time advanced standing students (one year) can complete the program in one year; part time will take two years. Students may also choose a combination which will allow them to complete the program in three years.

**M.S.W. Foundation Courses: 30 Hours**

SOWK 6000	MSW Practice I	3
SOWK 6010	Human Behavior and the Social Environment (online)	3
SOWK 6020	Research I	3
SOWK 6030	Social Welfare Policy and Services (online)	3
SOWK 6100	MSW Practice II	3
SOWK 6110	Social Justice and Equity for Multicultural Populations (online)	3
SOWK 6120	Research II	3
SOWK 6130	Practicum IA	3
SOWK 6140	Practicum IB	3

**M.S.W. Concentration Courses 30 Hours**

SOWK 6200	Advanced Practice with Individuals	3
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SOWK 6210	Advanced Practice with Families	3
SOWK 6220	Advanced Group Practice	3
SOWK 6230	Advanced Macro Practice	3
SOWK 6240	Social Policy Analysis (online)	3
SOWK 6300	Empirical Social Work Practice	3
SOWK 6310	Practicum IIA	3
SOWK 6320	Practicum IIB	3

**Electives: 15 Hours**

SOWK 5000 Special Topics (online) Foundation	9
Advance Standing (Concentration)	6

**Admission to Candidacy****The criteria for admission to Candidacy are as follows:**

- Unconditionally admitted to the MSW program
- Successfully completed a minimum of 12 hours of graduate work
- Maintained a cumulative GPA of 3.0
- Secured a faculty recommendation for candidacy
- Filed a plan/program of study with the School of Graduate Studies & Research which includes appropriate approvals from the advisor, departmental chair, and dean.

**Comprehensive Examinations**

The MSW is a non-thesis program. The culminating experience for the MSW program will be a written comprehensive examination completed in the student's final semester of study. The exam incorporates both the application of research and the integration of classroom and field-based learning experiences. Information about the comprehensive exam will be provided in the SOWK 6300 Empirical Social Work Practice course during that final semester.

**DESCRIPTION OF COURSES****A. Foundation Courses:**

**SOWK 6000. MSW PRACTICE I (3 )**. A social work methods course designed to enable the student to understand and apply social work methods within the context of the generalist perspective with individuals and families.

**SOWK 6010. HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT (3)**. An introduction to the theories and knowledge of the human bio-psycho-social development including theories and knowledge about the range of social systems in which individuals live (families, groups, organizations, agencies, and communities). (online delivery)

**SOWK 6020. RESEARCH I (3)**. This is a basic research and statistical methods course, utilizing research in general inquiry and practice evaluation in social work with the generalist perspective.

**SOWK 6030. SOCIAL WELFARE POLICY AND SERVICES (3)**. The historical development, philosophical orientation, and analysis of U.S. social welfare policy and services, including the global context. (online delivery)

**SOWK 6100. MSW PRACTICE II (3)**. A social work methods course designed to enable the student to understand and apply social work methods within the context of the generalist perspective with groups, agencies, and communities. Pre-requisite MSW Practice I

**SOWK 6110. SOCIAL JUSTICE & EQUITY FOR MULTICULTURAL POPULATIONS (3)**. An overview of the professional commitment of social work to oppressed peoples. (online delivery)

**SOWK 6120. RESEARCH II (3)**. An advanced discussion of program evaluation strategies and single system design issues. The student will conduct a research project. Pre-requisite Research I

**SOWK 6130. PRACTICUM IA (3)**. A 200 hour field practicum experience within the generalist perspective. May be taken concurrently with SW 6140 Practicum IB. Pre-requisites MSW Practice I, HBSE, Research I, & Policy

**SOWK 6140. PRACTICUM IB (3)**. A 200 hour field practicum experience with the generalist perspective. May be taken concurrently with SW 6130 Practicum IA. Pre-requisites MSW Practice I, HBSE, Research I, & Policy

**B. Concentration Courses:\***

**\*Prerequisite: All foundation courses must be completed unless student is admitted as advanced standing**

**SOWK 6200. ADVANCED PRACTICE WITH INDIVIDUALS (3)**. Advanced practice with individuals including client system assessment, intervention, and evaluation.

**SOWK 6210. ADVANCED PRACTICE WITH FAMILIES (3)**. Advanced practice with families including client system assessment, intervention, and evaluation.

**SOWK 6220. ADVANCED GROUP PRACTICE (3)**. Advanced practice with groups including client system assessment, intervention, and evaluation.

**SOWK 6230 ADVANCE MACRO PRACTICE (3)**. Advanced practice with organizations and communities including system assessment, intervention, and evaluation.

**SOWK 6240 SOCIAL POLICY ANALYSIS (3)**. A study of the design, implementation, and analysis of social policies and their impact on social work practice. (online delivery)

**SOWK 6300 EMPIRICAL SOCIAL WORK PRACTICE (4)**. A seminar in the integration of theoretical perspectives and the application of research findings and empirical outcome evaluation techniques to advanced generalist social work practice. Pre-requisites Social Policy Analysis, Advanced Practice with Individuals, and Families or Groups

**SOWK 6310 PRACTICUM IIA (4)**. A 250 hour field practicum experience. May be taken concurrently with SW 6320 Practicum IIB. Pre-requisites Social Policy Analysis, Advanced Practice with Individuals, and Families or Groups

**SOWK 6320 PRACTICUM IIB (4)**. A 250 hour field practicum experience. May be taken concurrently with SW 6310 Practicum IIA. Pre-requisites Social Policy Analysis, Advanced Practice with Individuals, and Families or Groups

**Elective Courses**

**SOWK 5000 SPECIAL TOPICS (3)**. Special topics in social work and social welfare. They may be repeated for a maximum of 15 hours. (Online delivery)

**Graduate Faculty**

Delores C. Butler, Assistant Professor and Director of Field

B.S., 1972, Indiana State University; M.S.S.W., 1978, University of Tennessee.

Rebecca Maldonado Moore, Associate Professor

B.S., 1977, M.S.W., 1979 University of Utah; Ph.D. 2002, Cornell University

Michael Anthony Wright, Associate Professor

B.S.W., 1996, M.S. W., 1997, Andrews University; Ph.D., 2003, University of South Carolina

# THE AVON WILLIAMS CAMPUS CENTER FOR EXTENDED EDUCATION AND PUBLIC SERVICE

**Dr. Evelyn E. Nettles, Associate Vice President for Academic Affairs**  
**Suite M200, Avon Williams Campus**  
**(615) 963-7001**  
[enettles1@tnstate.edu](mailto:enettles1@tnstate.edu)

The Avon Williams Campus (AWC) of Tennessee State University is located at 330 10th Avenue North, in the heart of downtown Nashville. This facility, which serves as the hub for the University's night, weekend, and distance education offerings, was named for the noted Civil Rights attorney Avon Nyanza Williams Jr. who brought litigation that sought to end segregation in public higher education in the state of Tennessee. At the Williams Campus, traditional and nontraditional students are afforded the opportunity to earn a degree during the day, in the evening, on weekends, and via distance education delivery systems. Both undergraduate and graduate degree programs are offered at this facility. The Williams Campus houses the offices of Student Support Services for Adult and Distance Learners Distance Education and Multimedia Services, and Continuing Education. Through academic programming and reliable and efficient student support services, the University reaches beyond its walls to serve citizens throughout the state and around the globe.

## Center for Extended Education and Public Service

The Center for Extended Education and Public Service is the administrative unit at AWC responsible for coordinating academic and community service outreach that advances TSU's mission of instruction, research, and service. It is also the administrative unit responsible for the operations of the Avon Williams Campus. Programs offered through Extended Education are designed to meet the professional, career development, personal and civic awareness needs of persons in the University's service area, and among select client groups throughout the state and the nation. When specific needs are identified, instruction or assistance is provided on and off campus at times convenient to the learner or the sponsoring organization. All services are designed to facilitate individual adult participation, learning, achievement and/or organizational development.

## Student Support Services for Adult and Distance Learners (OSS-ADL)

The primary goal of a OSS-ADL is to provide a single point of access for academic and support services and to remove barriers for nontraditional students by extending services beyond the traditional hours in a seamless approach. The Office of Student Support Services for Adult and Distance Learners coordinates and makes available, within the standing University academic and student services structure, support services for students who attend classes at night, on weekends, at off-campus sites, and via distance education delivery. This unit provides recruitment, admissions, and financial aid services to all nontraditional students. Through OSS-ADL, nontraditional students have access to the Counseling Center, Career Placement, Disabled Student Services, Graduate and Professional Opportunities, and Minority and International Affairs and Multimedia Services.

## Distance Education

Distance education at Tennessee State University allows the Institution to extend its resources in the areas of instruction and service to citizens within the state of Tennessee and to persons around the world

Classes are offered through various technological delivery systems including, interactive video instruction, TSU online, and the Regents Online Campus Collaborative (ROCC).

Classes are offered through various technological delivery systems including, interactive video instruction, TSU online, and the Regents Online Campus Collaborative (ROCC). All distance education classes are planned and conducted in accordance with the academic requirements and regulations of participating academic colleges and schools. Descriptions of the various types of distance education delivery modes are as follows:

1. Interactive Video Courses – Interactive video courses allow TSU to broadcast live instruction to enrolled students on-ground and at remote sites, in addition to individual desktops via Voice-Over-IP (VOIP). The remote sites can include other colleges, universities, and school systems. This method of delivery allows the instructor to communicate in real time via both audio and video.
2. TSU Online Program – TSU Online courses are delivered via the University's course management system. Students are required to read assignments, participate in discussion groups, and communicate with professors and other students by email. In addition, students are responsible for reading textbook assignments, completing papers and projects, and taking examinations. As the course is delivered completely online, students must have proficient computer skills, access to a computer with administrative rights to download software and change computer settings, etc., and a dependable internet service provider (ISP). Students are required to complete an orientation module online prior to accessing their course(s). TSU online courses are designated in the course schedule as section 98. TSU offers the Bachelor of Science in Sociology and the Bachelor of Science in Urban Studies fully online.
3. Regents Online Campus Collaborative (ROCC) – Tennessee State University, in collaboration with the Tennessee Board of Regents Online Campus Collaborative (ROCC), offers the Bachelor of Science in Interdisciplinary Studies and Bachelor of Science in Professional Studies with concentrations in Health Administration, Organizational Leadership, International Organizational Leadership or Information Technology. Courses offered through these programs are delivered completely online although some courses may require proctored tests. ROCC courses are designed to meet the needs of the adult student who cannot attend school because of family, work, and/or other obligations. Students interested in pursuing one of these degrees must apply to TSU and meet the general admissions requirements. Upon acceptance to TSU, the student must meet with the TSU Student Support Services Counselor in person or by telephone to plan a program of study. In addition, academic advisement for students enrolled in the Regents Online Campus Collaborative is handled by the TSU Student Support Services Counselor. ROCC courses are designated as section R50. ROCC course fees are charged on a per hour basis and are in addition to standard course fees. While these courses are designed for students majoring in the degrees listed above, all TSU students may enroll in ROCC courses as approved by their faculty advisor.

Center for Teaching, Learning and Technology (Multimedia Services)

The Center for Teacher, Learning, and Technology is to enhance the teaching and learning process in the classroom, distance education and continuing education programs by providing leadership, support and a broad range of services to Tennessee State University faculty, staff and students. This goal enables the University to incorporate existing and emerging technologies in the learning environment.

The Center (1) provides training in the use of educational technology; (2) assists faculty develop, implement and assess the effectiveness of advanced research-based teaching and learning methodologies, including multimedia learning; and (3) increases the use of technologies in support of technology-enhanced courses, online courses and other distance learning environments.

For more information, contact the Office of Distance Education and Multimedia Services at (615) 963-7001 or visit [www.tnstate.edu/online](http://www.tnstate.edu/online).

### **Non-Credit and Continuing Education**

The Office of Non-Credit and Continuing Education offers non-credit courses designed to meet the professional, personal and civil needs of the adult community.

The unit offers courses/activities throughout the year both on and off campus in response to special client needs and for the greater community that range from workforce development, skill enhancement to personal interest courses. The instruction is supported by regular and part-time faculty and it is designed to meet the special needs of both the vocational and avocational learner of which Continuing Education Unit (CEU) credits may be awarded.

Continuing Education Unit (CEU) credits are a quantitative unit of measure to recognize participation in an organized educational activity within the scope of non-credit courses. Participants of selected instructional activities that are approved within published guidelines earn CEU credits for the purposes of completing training programs, or obtaining and renewing licenses and certifications. Institutional records of such learning experiences are maintained by the Office of Non-Credit and Continuing Education and are available upon written request by the student.

For more information, contact the Office of Non-Credit and Continuing Education at 615-963-7001.

## **RESEARCH AND SPONSORED PROGRAM**

**Lesia Crumpton-Young, Ph.D., Chief Research Officer and Associate Vice President  
for Research and Sponsored Programs (RSP)**

**Research and Sponsored Programs (RASP) Building**

**(615) 963-7631**

**(615) 963-5063 (FAX)**

[www.tnstate.edu/research](http://www.tnstate.edu/research)

[dryoung@tnstate.edu](mailto:dryoung@tnstate.edu)

Research and Sponsored Programs (RSP) provides leadership, information, and services to encourage faculty, research associates, post-doctoral fellows, and staff to engage in research projects and creative activity. The University receives awards from federal agencies, state agencies, and private foundations for research, training, and technical assistance. RSP seeks to provide the best environment for study and research through a creative association of faculty and students as a community of scholars in expanding the boundaries of science, education, and technology. It serves as a liaison between funding agencies, principal investigators (PIs), and administrative units of the University. The RSP administration provides the following services:

- Locates potential funding sources
- Coordinates compliance on human subjects, animal care, and safety involving chemical and biological hazards with university, state and federal regulations
- Coordinates research initiatives, partnerships, collaborations and cooperative agreements
- Guides faculty and staff through the proposal development and grant application process
- Routes proposals through proper administrative channels for approvals and endorsements
- Maintains university award files
- Assists in matters related to intellectual property patents, copyrights and publication agreements
- Monitors progress and execution of funded projects
- Provides education and training in research and grant administration, compliance, research ethics, and other related areas

Strengthening TSU's research infrastructure is the major priority of RSP. Research at Tennessee State University utilizes the diverse

skills and expertise of our researchers, faculty, staff, and students to make significant and sustained contributions to the knowledge of humankind through new discoveries that have positive impact on our community, our nation, and the world in which we live.

Tennessee State University displays a broad spectrum of sponsored research projects, ranging from basic to applied, and from single PI grants to major interdisciplinary collaborations. TSU has averaged approximately \$40M annually in research and sponsored program awards in recent years. It has over 100,000 sq. ft. of floor space designated for scientific and technological research, which includes the Research and Sponsored Programs (RASP) Building completed in 2008. Current projects include research in astronomy, computer modeling and simulations, biomedical applications of signal processing, hazardous waste management, neural networks and fuzzy logic, robotics and machine vision, AI/expert systems, computational science, gene expression, plant genetics, animal science, agricultural biotechnology, health research, and nanoscience. TSU also conducts research in software engineering, advanced manufacturing and packaging, materials processing, drug-binding to DNA, topology, large scale control and distributed computing systems, astrophysics and astrobiology, forestry, organic synthesis, transportation planning and modeling, and several other fields of study. TSU is in partnership with Meharry Medical College and the Vanderbilt-Ingram Cancer Center at Vanderbilt University to identify and eliminate disparities in cancer treatment. In addition, the faculty is involved in scholarly activity in the arts and has a state-of-the-art performing arts center that is an integral part of ensuring a well-rounded educational experience for students at TSU and the community.

At Tennessee State, we believe research is essential to excellence in education and enhances the learning experience of our students.

# CENTER OF EXCELLENCE INFORMATION SYSTEMS ENGINEERING AND MANAGEMENT

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## MISSION STATEMENT

The mission of the Center of Excellence (COE) is to provide an environment conducive to and facilities in support of interdisciplinary research in selected areas of information systems. Since 1987 the Center has produced more than 1200 publications of which over 900 have appeared in refereed journals.

## INTRODUCTION

The COE at Tennessee State University is a multidisciplinary research unit founded in 1986 as part of the state-wide Centers of Excellence program whose mission is to expand the research base of the state of Tennessee. The Center consists of researchers, support staff, and students in the areas of astronomy, advanced control systems and systems identification, applied mathematics, cyber security, and management information systems. Graduate and undergraduate students are drawn from the computer science, physics, mathematics, and engineering curricula. The Center is located on the second floor of RASP Building.

## 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. Since 1987, the Center has generated over \$35 million in externally funded research from many sources including the NSF, NASA, and DoD.

## MAJOR RESEARCH AREAS

**Robotic Telescopes** - The COE is a leading institution in the field of designing and building robotic telescopes for high precision astronomy, and ensuring their robust and safe operations without human intervention. TSU astronomers currently operate six 16-inch to 32-inch automatic photoelectric telescopes (APTs) that make highly precise measurements of stellar brightness changes. Additionally, there are a 14-inch automatic imaging telescope (AIT) and an 81-inch automatic spectroscopic telescope (AST). All telescopes are located in the Patagonia Mountains of southern Arizona where they are maintained for TSU by Fairborn Observatory, a non-profit scientific research organization.

**Stellar Astrophysics and Exoplanet Exploration** - Center astronomers use the robotic telescopes to conduct long-term research projects that would be too difficult or too expensive to accomplish without the benefits of automation. Astronomers in the Center 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, prototype new astronomical instrumentation technologies, 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. Researchers are developing techniques to model systems with uncertainties, and theories to analyze the performance and behavior of such systems. Recent initiatives include developing methods for secure network-based wireless control systems. New and efficient control design methodologies that ensure stability and performance of the systems under various changing environments are under study.

**Applied Mathematics** - Center applied mathematicians are developing the tools to study the fundamental characteristics of large-scale complex dynamic systems. Our current research projects include investigation of dynamic reliability, controllability, estimation and stability of complex dynamic systems under both structural and environmental randomly varying perturbations. In this context, we are developing (1) stochastic approximation procedures under various modes of convergence, (2) stochastic stability via Lyapunov's techniques and comparison results, and (3) implicit and explicit numerical schemes and algorithms. Our investigation includes real world problems from multi-species communities, multiple market systems, image processing problems, dynamics of fluids and gas flows, immigration and emigration, and complex environmental systems.

## **CENTER OF EXCELLENCE FOR LEARNING SCIENCES**

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The Tennessee Board of Regents' Center of Excellence for Learning Sciences (formally Research and Policy on Basic Skills) at Tennessee State University is one of Tennessee's accomplished Centers of Excellence. Centers of Excellence 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 Center for Learning Sciences is located on the first floor in Suite 1B of the Research and Sponsored Programs Building on the main campus of Tennessee State University.

### **MISSION STATEMENT**

The mission of the Center of Excellence for Learning Sciences is to design and conduct multidisciplinary research and demonstrations concerning practices, policies, and programs that promote the educational, social, physical, and psychological well-being of children and families; and to disseminate research and information to improve public policy and the programmatic decisions of agencies, schools, institutions, and communities in Tennessee, the nation, and the global community.

### **FUNDING SOURCES**

The Center then began efforts to ensure the quality of learning during the early years and launched several programs to train and support early child care providers including Tennessee Child Care Provider Training (TN-CCPT), Tennessee Child Care Resource and Referral Centers (CCR&Rs), and the Tennessee Early Childhood Training Alliance, or TECTA, program. The Center also received funding to administer the Tennessee CAREs Early Head Start program that serves children and their families in west Tennessee. These programs continue to support Tennessee's early childhood workforce and coincide with the Center's mission.

Original funding for the Center of Excellence comes from the State of Tennessee Higher Education Commission with additional matching funds from Tennessee State University. The Center receives grant and contract awards from agencies such as the National Science Foundation, U.S. Department of Health and Human Services, Tennessee Department of Human Services, Tennessee Department of Health, Tennessee Higher Education Commission, and others that allow the Center to promote innovation, enhance collaboration, and provide professional development to educators and human service agencies. Over the years the Center has received millions in funding from these and other organizations to conduct research in teacher development and student education in science. The Center of Excellence for Learning Sciences administers research, service, and academic projects as well as maintains internal and external collaborations with other academic units.

### **THE HISTORY OF THE CENTER OF EXCELLENCE FOR LEARNING SCIENCES**

The Center of Excellence for Learning Sciences began as the Center for Research and Policy on Basic Skills. It was renamed in 2007 to more accurately describe its mission and to expand the research initiatives of the Center. Learning Sciences is an interdisciplinary/multidisciplinary field that draws on multiple theoretical perspectives and research paradigms with the goal of advancing knowledge about human learning and development in formal and informal settings. Researchers in the Learning Sciences develop understanding about the nature and conditions of learning, cognition, material, social and cultural contexts. The intent of learning sciences research is to develop evidence-based claims about how people learn that have theoretical, practical, and pedagogical implications. Given this focus on interrelated theory and practice, the learning sciences frequently involve carrying out design and implementation research. This research is intended to improve the education of all learners but often has particular emphasis on finding solutions for minority and disadvantaged students for whom achievement gaps are a continuing problem.

The Center of Excellence for Learning Sciences began researching the effects of small class size in the late 1980s. This research study grew in size and scope and become nationally recognized as the Student/Teacher Achievement Ratio, or STAR, project and its findings continue to be heralded as the most effective evidence in the case for small class sizes in early elementary grades.

### **Major Research and Sponsored Project Areas**

#### **Tennessee CAREs Early Head Start Program**

The Tennessee Comprehensive Area Resource Efforts Early Head Start (Tennessee CAREs EHS) unit administers one of the original 68 national Early Head Start research and demonstration programs. The Early Head Start Program is funded by the Administration for Children and Youth and is part of the national laboratory for research on best practices for infant/toddler and family programs.

#### **Tennessee Early Childhood Training Alliance (TECTA) Program Management**

The Center of Excellence for Learning Sciences is the statewide managing agent and provides research and development support to 8 regional TECTA offices located in Tennessee Board of Regents (TBR) colleges and universities. Each regional site supports a system of certificates, credentials, and degrees for early childhood education teachers and administrators. The TSU Site which serves the middle TN area is also housed within the Center of Excellence for Learning Sciences.

Related Initiatives:

- STEM Education
- Student Learning Measurement
- Teaching and Learning
- Early Childhood Education Professional Development
- Early Intervention Models
- Birth to Three Curriculum, Program and Professional Development
- P-16 Instructor and Administrator Professional Development

# Service Learning and Civic Engagement at Tennessee State University

**For information, contact**  
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## What is Service-Learning?

Service learning is a course-based, credit-bearing educational experience in which students participate in an organized service activity that meets identified community needs, and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility.

## Service-Learning Courses

To be well prepared for our increasingly multicultural and global society, TSU students must develop the skills to work collaboratively and compassionately to create more just and equitable workplaces, communities, and social institutions. TSU's service-learning courses, therefore, include learning objectives that help students clarify their own conception of service as they participate in the community. Service learning enables moral and civic learning to become a component of the curriculum. Learning becomes a tool for both individual and social betterment. Through service learning, TSU students acquire the knowledge, skills and awareness to become more culturally aware, self-reflective and responsive community participants. Service-learning is integrated into courses in many academic majors across campus.

Service learning provides an opportunity for graduate students to apply critical thinking and problem solving skills to fulfill community needs. Graduate service-learning projects allow students to take on leadership roles and pilot programs for community organizations that may have limited resources. Through service-learning and engaged scholarship, graduate students can participate in a variety of research and service projects that contribute to the welfare and development of individuals and of communities. Current service-learning projects in graduate courses include health services, marketing plans for struggling non-profits, urban problem solving, occupational therapy with low-income children, data collection for small non-profits, green building in engineering, tutoring in reading, grant writing, assessments of community needs, and studies of local environmental issues. The Center coordinates a number of service learning experiences and offers a graduate academic certificate in non-profit management.

Service-learning courses exist in a variety of disciplines. A communications course may require students to write newsletters or brochures for a community agency and gain an appreciation of writing for an external audience as they strengthen writing skills; an education course provides students the opportunity to serve as tutors/mentors at a local inner city school as a way to practice teaching strategies and understand the value of cultural diversity;

urban studies students create GIS maps of homeless populations; MBA students assist a local community center with strategic planning and data analysis to gain an understanding of how skills developed for the private sector can also meet community needs.

## The Scholarship of Engagement

“The scholarship of engagement means connecting the rich resources of the university to our most pressing social, civic and ethical problems, to our children, to our schools, to our teachers and to our cities...” We expect our graduate students to be involved in research and engaged scholarship that benefits not just their academic disciplines but also meets an identified public need.

The Center for Service-Learning and Civic Engagement Vision: Knowledge, Engagement, Reflection, Transformation — Where scholarly service is the bridge uniting learning with civic responsibility.

As a land grant university and an HBCU, Tennessee State University has a rich tradition of service and an opportunity to instill in our students an ethic of caring and a sense of responsibility for making our world better. We strive to move beyond service — to transform our university and our communities through sustainable partnerships with the community.

## Goals of TSU's Service-Learning Programs

- To expand our service-learning offerings to meet students' learning needs
- To provide students with the opportunity to meet academic learning objectives through participation in community service experiences
- To enhance student learning by connecting theory with experience and thought with action
- To give students opportunities to engage in mutually beneficial work in the community
- To increase the civic and leadership skills of students
- To better prepare students for their careers and continuing education
- To help students address issues of justice, diversity and social responsibility through service-learning
- To educate students with the knowledge, skills, and attitudes to create a more just and humane world

Mission of the Center for Service-Learning and Civic Engagement:  
The Center exists to facilitate quality educational experiences through community-based service-learning. The Center connects campus and community resources to create diverse learning experiences and to serve community needs. Its programs integrate the academic, service,

and reflection components of service-learning by providing resources - including training and technical assistance, to students, faculty and community. In doing this, the Center advances TSU's goals of quality teaching, research, and service.

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